TEST NAME: **8th F.5 Schoolnet**
TEST ID: **638022**
GRADE: **08**
SUBJECT: **Mathematics**
TEST CATEGORY: **School Assessment**

Student:

Class:

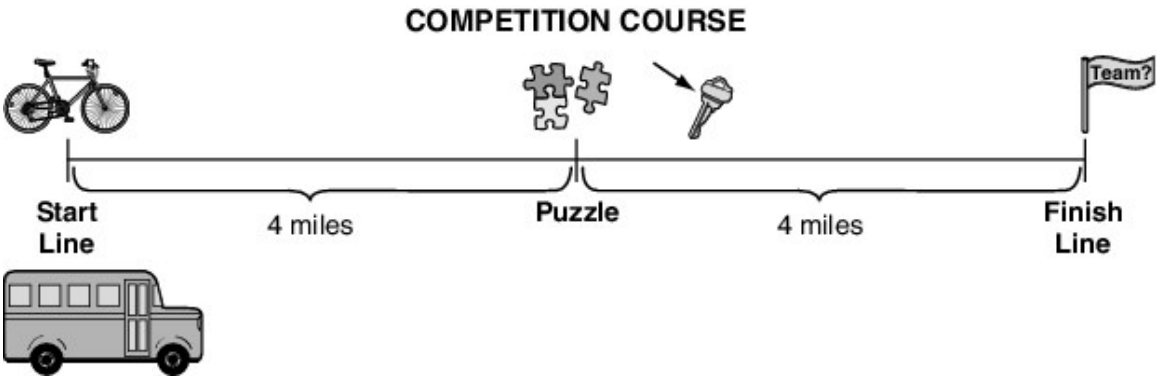
Date:

Read the passage - 'Race to the Finish' - and answer the question below:

Race to the Finish

Race to the Finish
"Ready, set, go!"

The team competition has just begun. Two teams have to make their way across an 8-mile course. There is a puzzle in the middle of the course that will need to be solved to retrieve a key. This key will be used to raise a team flag at the end of the course. The first team to raise its flag will be the winner. A course map of the competition is shown below.



The first decision the teams need to make is what transportation they are going to use throughout the competition. They can walk, ride bikes, or take the bus. Both teams are given the following information to help them weigh their options.

1. A person walks at an average speed of about 3 miles per hour (mph).
2. A person rides a bike at an average speed of about 12 mph.
3. The bus travels at a much faster speed, but you may have to wait up to 10 minutes for it to arrive.

Those on team 2 make their decision immediately. They choose to take the bus because it has the fastest speed. Members of team 1 discuss the possibility of having to wait for the bus to arrive, but they are not willing to risk losing the valuable time. They jump on the bikes and take off.

As it turns out, those on team 2 have to wait 6 minutes for the bus to arrive before it takes them to the site of the puzzle. It takes them a total of 14 minutes from the start of the race to arrive at the puzzle and only 7 minutes to complete their puzzle. They are able to catch the bus immediately to take them to the finish line and they arrive after 29 minutes from the start of the race. It seems as if luck is on their side.

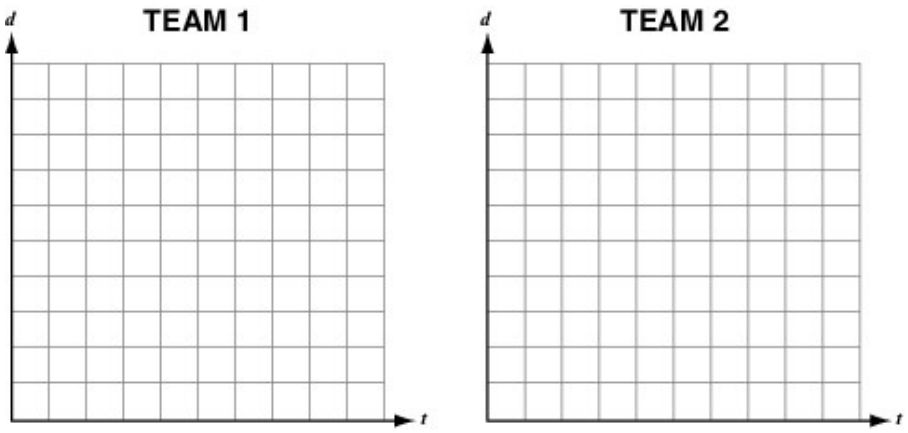
Members of team 1, on the other hand, struggle with their puzzle, which takes them 13 minutes to complete. They already saw team 2 catch the bus

several minutes ago and are convinced that there is no way to catch up on their bikes. They are feeling defeated but want to complete the event, so they jump on their bikes and head toward the finish line. Little do they know they still have a chance of finishing first.

As those on team 2 arrive at the finish line, they jump off the bus. They are excited to get there first and eager to use the key to raise their victory flag. But there is a big problem. They forgot the key that they received when they completed the puzzle. Now, they are unable to raise their flag. Luckily, they are able to get back on the bus before it leaves the finish line. They even convince the bus driver to take them back to get their key and then back to the finish line, but will the bus be fast enough to get them there and back before members of team 1 arrive on their bikes?

1. Read "Race to the Finish" and answer the questions.

   Part A. Use the coordinate grids below to sketch two graphs that show the distance, in *d* miles, each team is from the finish line *t* minutes after the start of the race. Assume the speed of the bus stays constant regardless of the route, so it takes team 2 the same amount of time to get back to the puzzle and then back to the finish line as it did when they traveled from the puzzle to the finish line the first time. Make sure to label the axes and choose appropriate scales.

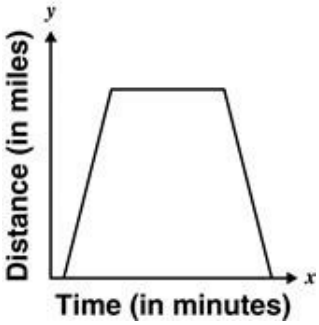


   Part B. Who wins the race? Explain using your graph.

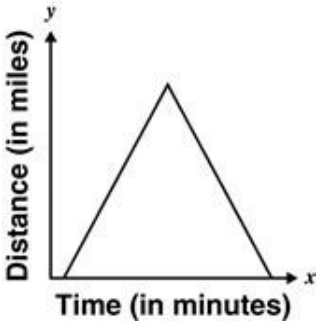
   Use words, numbers, and/or pictures to show your work.

2. **A school bus was stopped for 2 minutes at a red light. When the light turned green, the driver accelerated the bus at a steady rate and then continued driving at a constant speed. Next, the driver decreased the speed of the bus until it came to a full stop to pick up students. Which graph below best represents the speed of the bus over the time described?**

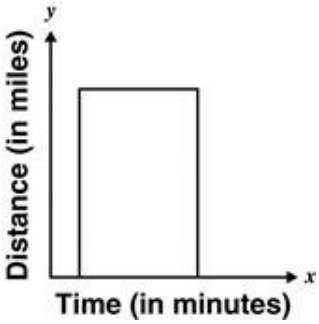
A.



B.

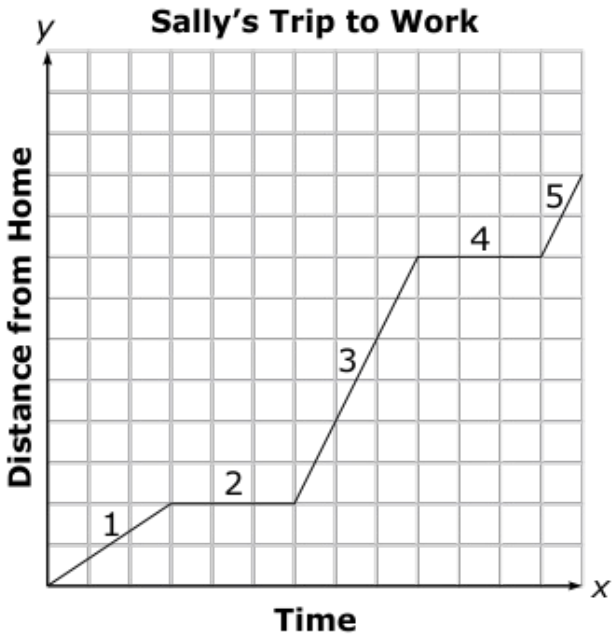


C.



D.

3. The graph below details Sally's daily trip to work.



Which is the ***best*** scenario for part 3 on the graph?

A. Sally is waiting at a stop light.

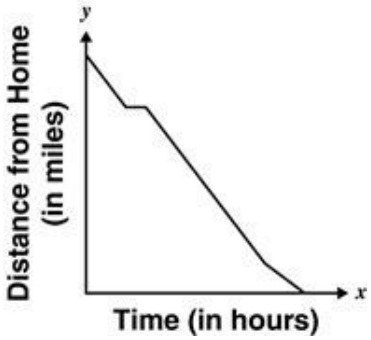
B. Sally is driving on an incline at a constant rate.

C. Sally is driving on a highway at a constant rate.

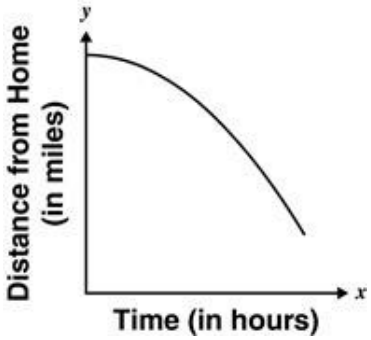
D. Sally is speeding up then slowing down through a neighborhood.

4. **Aki drove from home to visit a friend. His average speed during the first hour was 40 miles per hour (mph). For the next 3 hours he drove on the highway at 70 mph and then rested for 30 minutes. After the rest, Aki continued on the highway at 70 mph. Which graph best represents his distance from home as a function of time?**

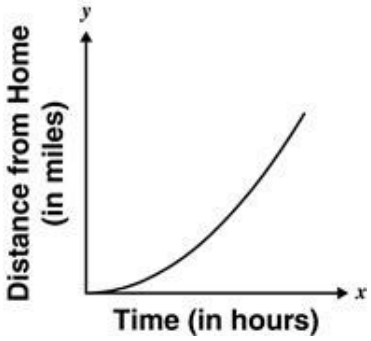
A.



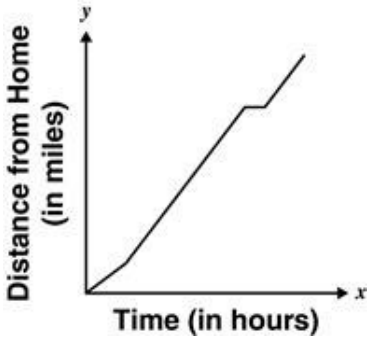
B.



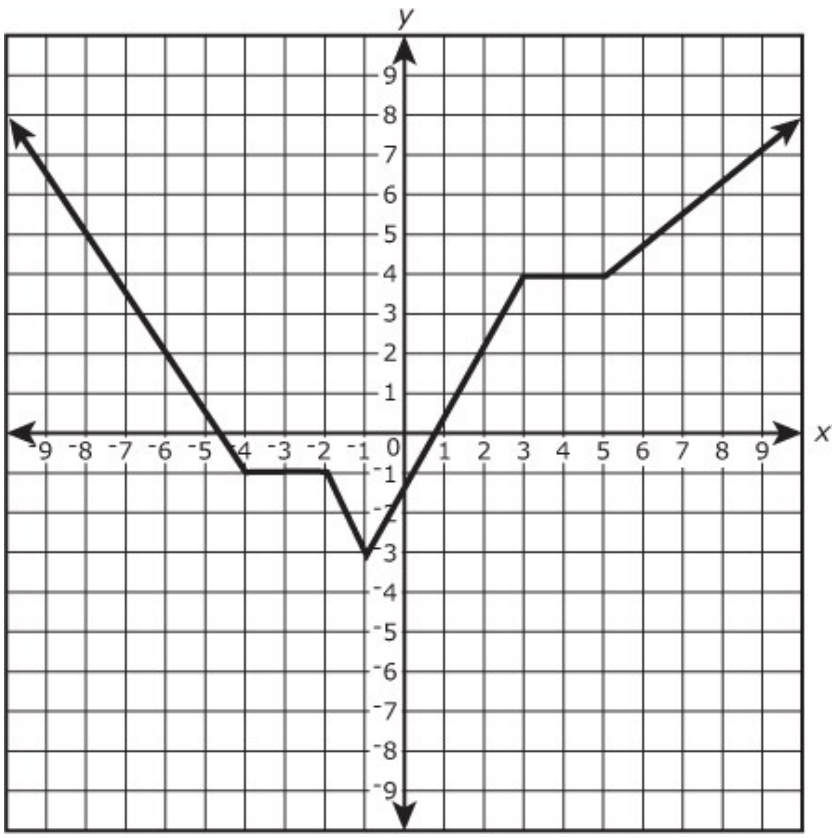
C.



D.



5. A function is graphed on the coordinate plane.



For what values of *x* is the graph increasing?

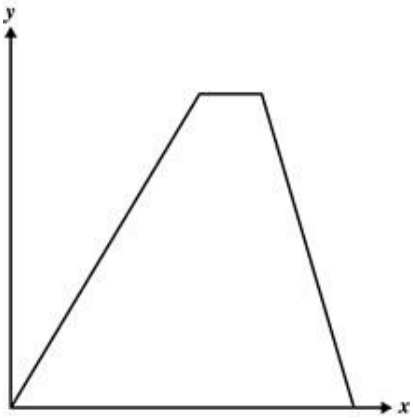
A. $-2 < x < 3$ and $x > 4$

B. $-1 < x < 3$ and $x > 5$

C. $x < -4$ and $-2 < x < -1$

D. $-4 < x < -2$ and $3 < x < 5$

6. **The graph below shows the relationship between two variables.**



Which scenario is best represented by the graph?

A. The value of a car decreased at a constant rate, remained constant for a while, and then began to increase.

B. The number of animals in the local zoo increased at a constant rate over the first ten years after the zoo opened.

C. The average rainfall in a town was constant for the first 4 months of the year. Over the next 6 months it increased and then gradually decreased.

D. The number of customers in a diner increased at a constant rate during the morning hours, remained the same during lunch, and decreased during the afternoon hours.

7. **Which table of values below represents a linear relationship?**

A.

x	*y*
–10	–10
–5	–6
0	–2
5	–6
10	–10

B.

x	*y*
1	1
2	4
3	9
4	16
5	25

C.

x	*y*
1	1
2	2
4	3
7	4
10	5

D.

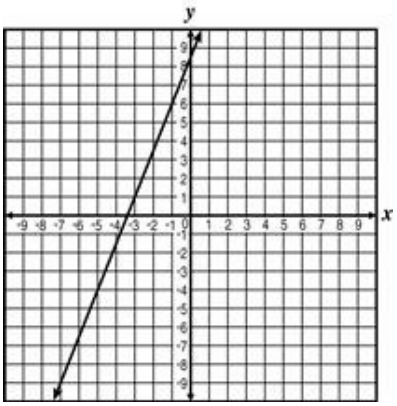
x	*y*
–10	–10
–6	–5
–2	0
2	5
6	10

8. **Which best describes the behavior of the graph** $2x + y = 4$?

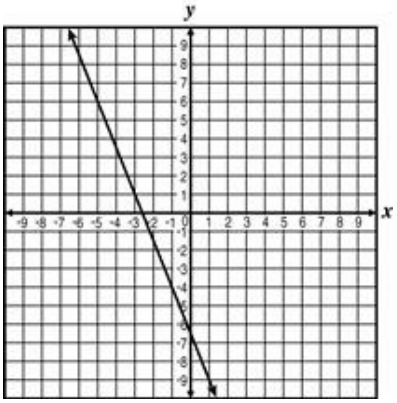
A. The graph is a vertical line.
B. The graph is a horizontal line.
C. The graph is rising as *x* increases.
D. The graph is falling as *x* increases.

9. **Which graph best represents the line with a slope of $-\frac{2}{5}$ that passes through the point $(-3, 1)$?**

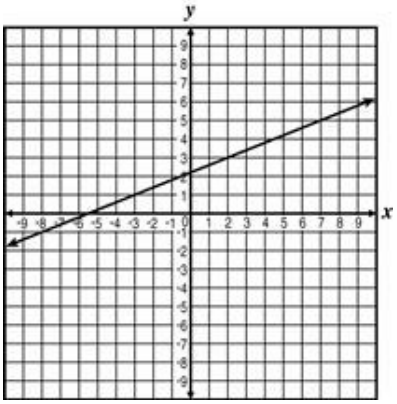
A.



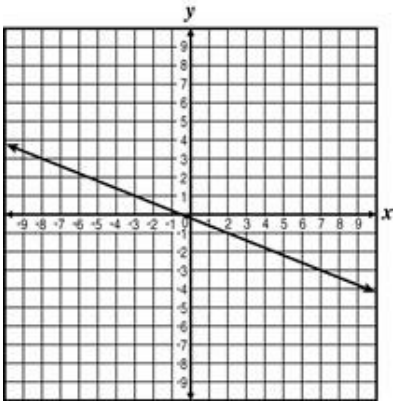
B.



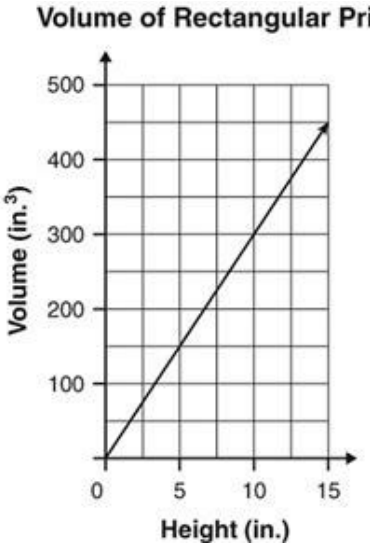
C.



D.

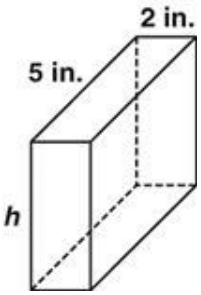


10. **The graph below represents the volume of a rectangular prism as its height, *h*, increases.**

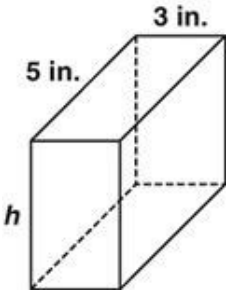


Which prism below is represented by the graph?

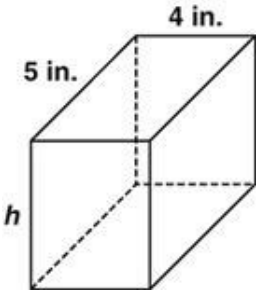
A.



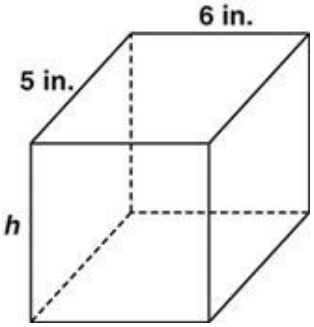
B.



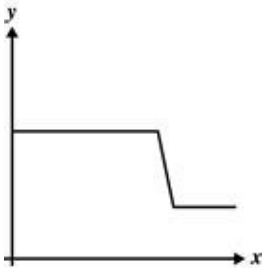
C.

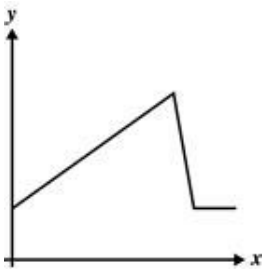


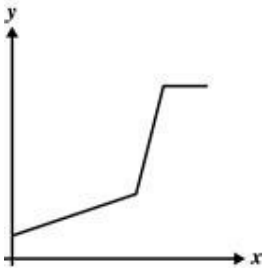
D.

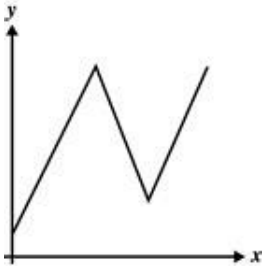


11. **The value of a sculpture steadily increased for several years and then dropped sharply. It then continued to remain at its lowest value. Which graph best represents the value of the sculpture over these years?**

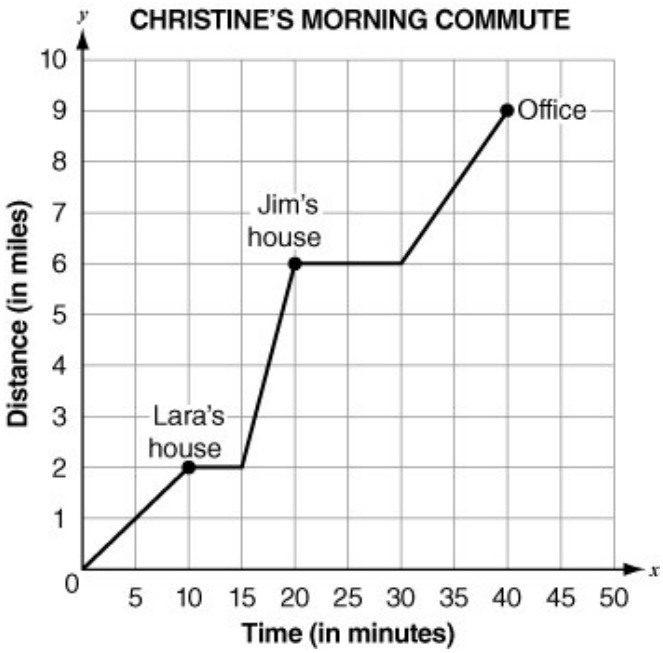
A.


B.


C.


D.


12. The graph below represents the time in minutes it took Christine to get from her house to the office including the time it took to pick up two friends, Lara and Jim, along the way. The *y*-axis represents the distance traveled by Christine throughout her morning commute to work.



Part A. In which portion of the trip did Christine have the highest average speed? Explain.

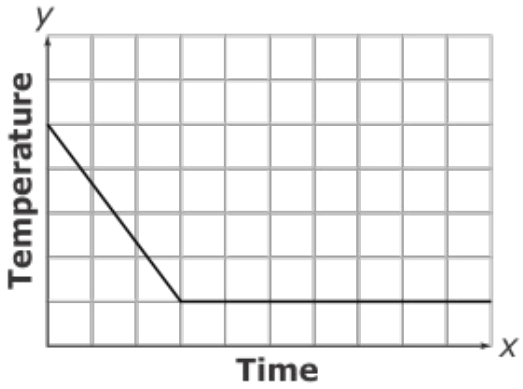
Part B. What do the horizontal lines (after Lara's house and Jim's house) represent? Explain.

Part C. How many miles away is Lara's house from Jim's house?

Part D. How many miles does Christine live from her office?

Use words, numbers, and/or pictures to show your work.

13. The following graph represents temperature over time.



Which scenario matches the graph?

A. A cake is taken out of the oven and left on a table to cool.

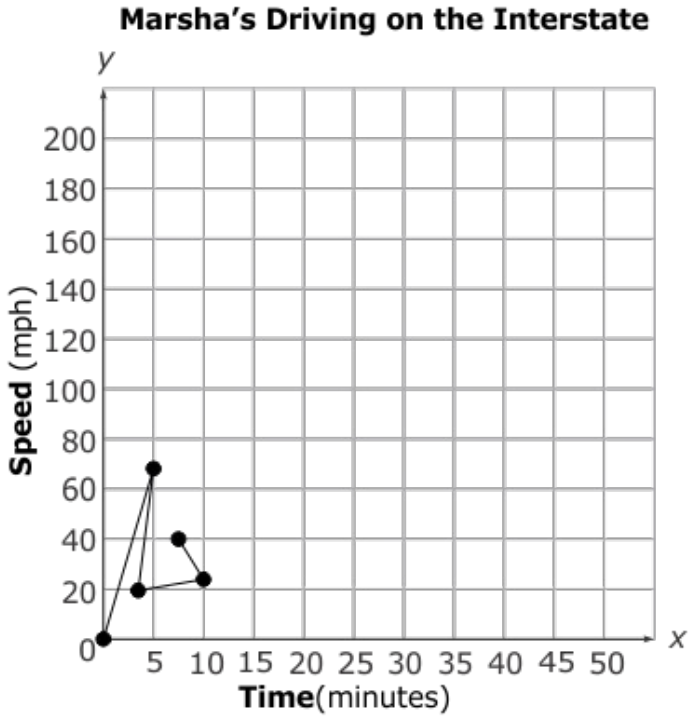
B. A pie is taken out of the freezer and is baking in the oven.

C. A cold oven is preheating to a certain temperature.

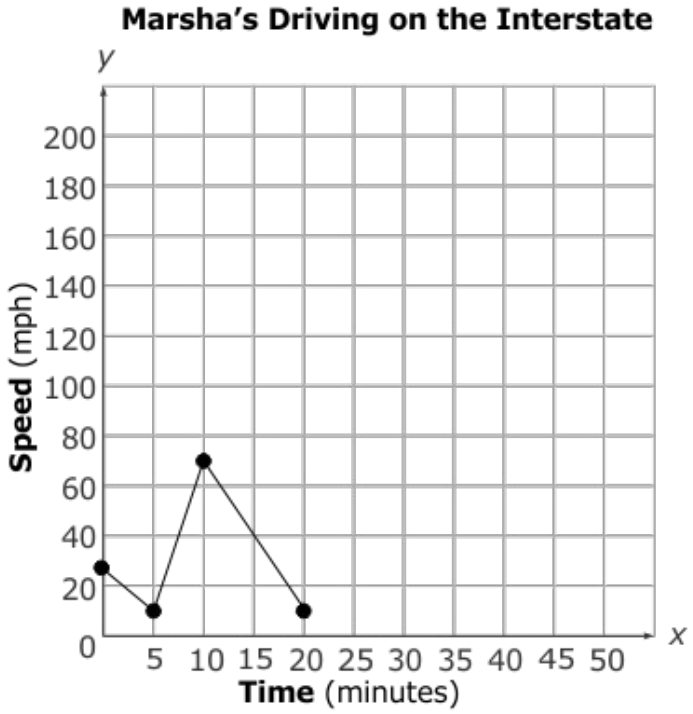
D. A warm oven is turned up to a higher temperature.

14. Which graph ***best*** represents Marsha driving a car to get on the interstate, setting her cruise control, increasing her speed to pass another car, and then exiting off the interstate and stopping at a stop sign?

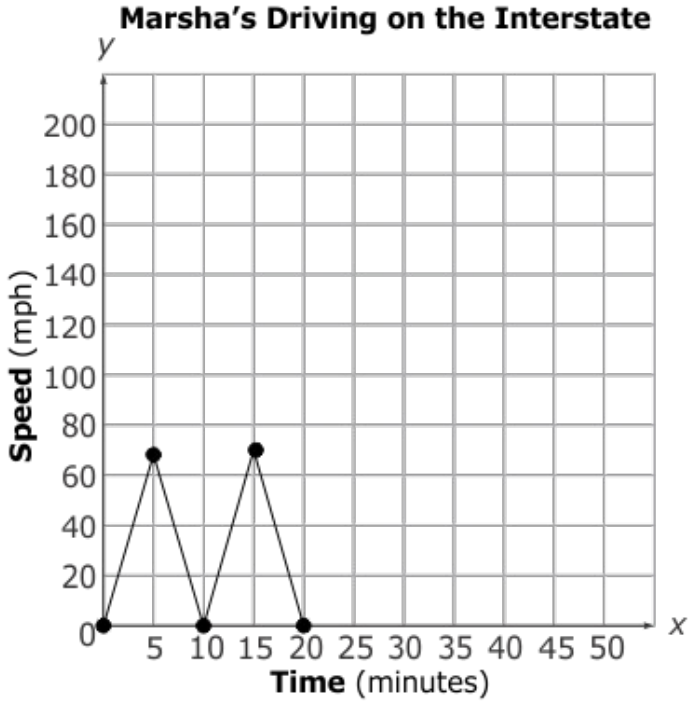
A.



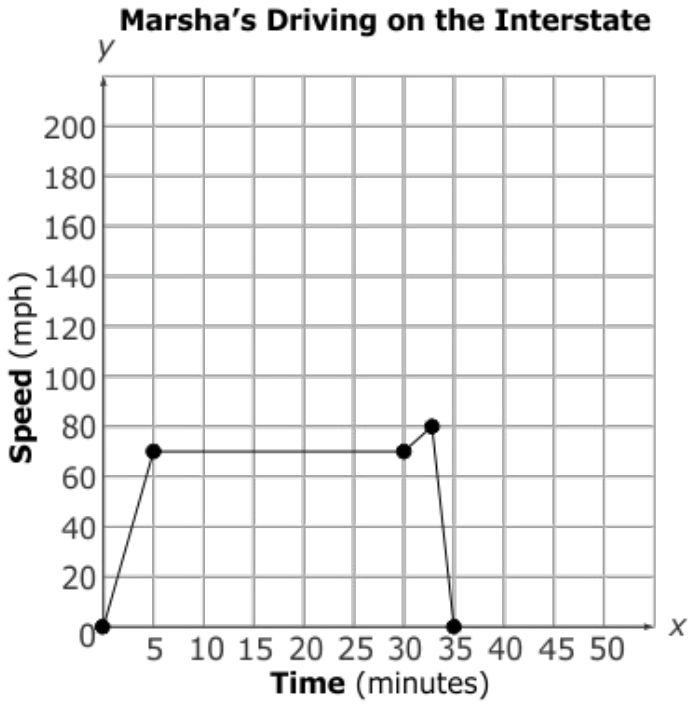
B.


Marsha's Driving on the Interstate
y
200
180
160
140
120
100
80
60
40
20
0
Speed (mph)
5 10 15 20 25 30 35 40 45 50
x
Time (minutes)

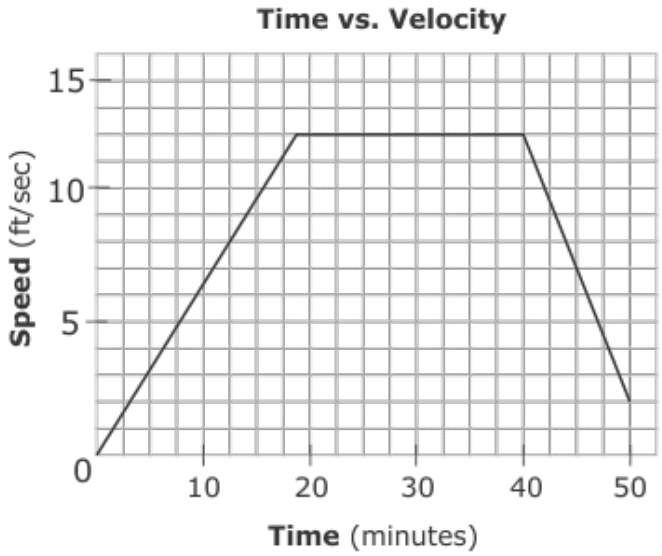
C.


Marsha's Driving on the Interstate
y
200
180
160
140
120
100
80
60
40
20
0
Speed (mph)
5 10 15 20 25 30 35 40 45 50
x
Time (minutes)

D.


Marsha's Driving on the Interstate
y
200
180
160
140
120
100
80
60
40
20
0
Speed (mph)
5 10 15 20 25 30 35 40 45 50
x
Time (minutes)

15. The graph below shows time vs. velocity over a 50-minute period of time.



Which scenario would be ***best*** represented on the graph?

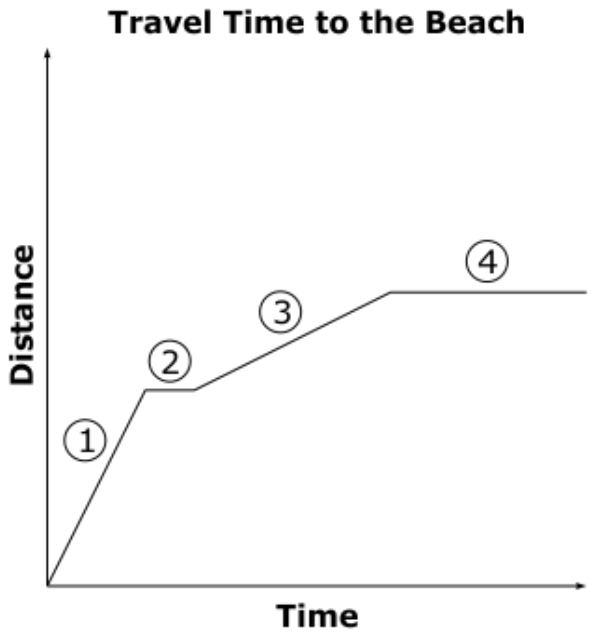
A. An object increases speed and then loses speed.

B. An object continues to move away from a starting point.

C. An object moves away from a starting point and then begins to come back.

D. An object increases speed, then moves at a constant rate, and then loses speed.

16. Jason drove to the beach. He recorded his travel time and distance in the graph below.



Which statement is true?

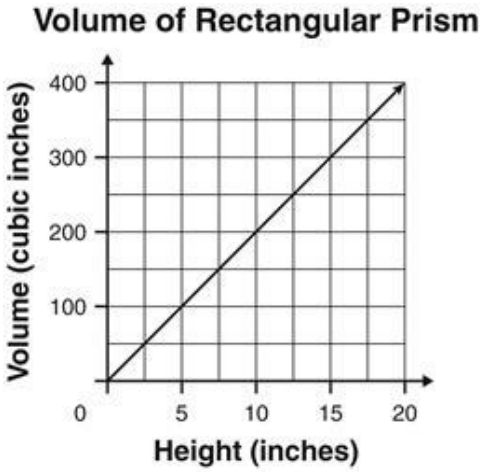
A. Jason's car was stopped at sections 2 and 4.

B. Jason was driving up a hill in sections 1 and 3.

C. Jason was driving faster at section 3 than section 1.

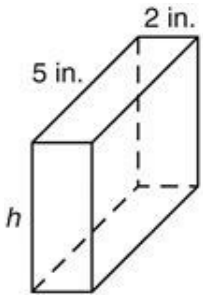
D. Jason drove the entire time to the beach.

17. **The graph below represents the volume of a rectangular prism as its height, *h*, increases.**

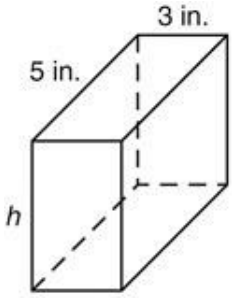


Which prism below is represented by the graph?

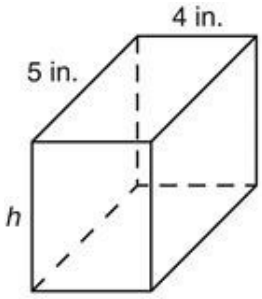
A.



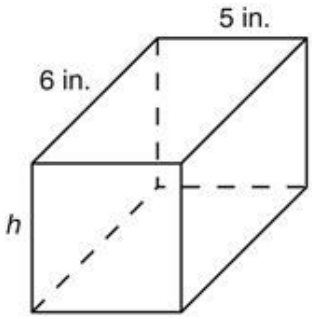
B.



C.

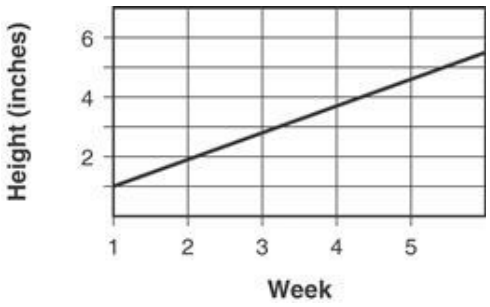


D.

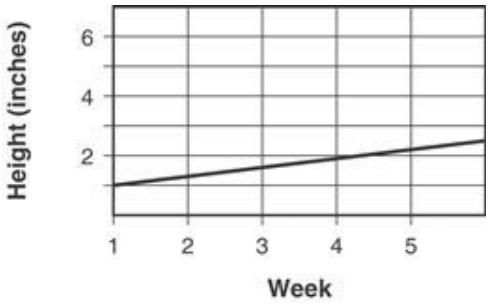


18. **Which of the following graphs best represents a 1-inch plant that grew $\frac{1}{4}$ inch taller each week?**

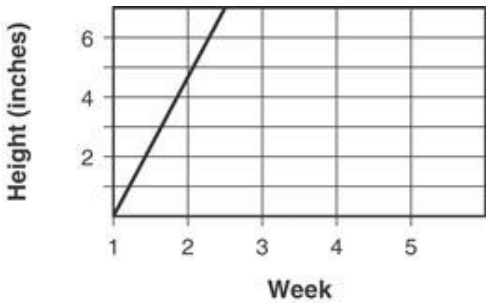
A.



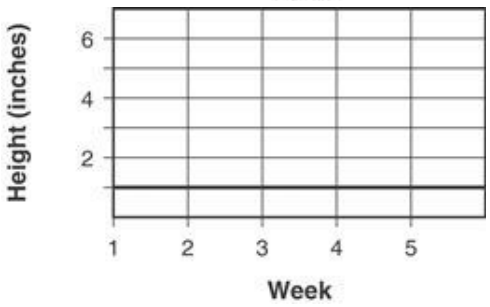
B.



C.

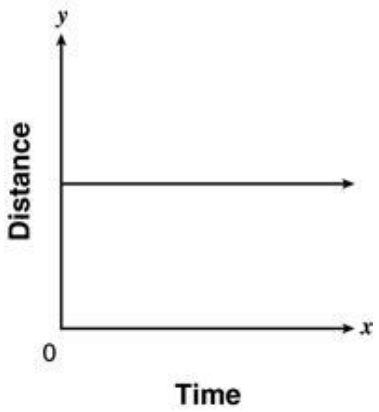


D.

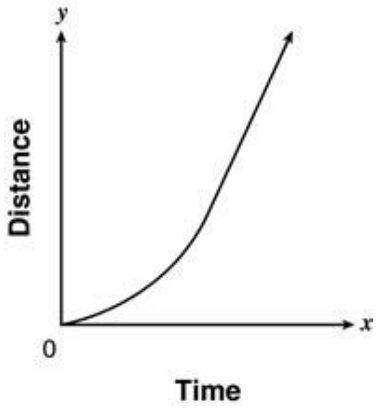


19. **Which graph represents the movement of a train whose distance from a starting point changes at a constant rate?**

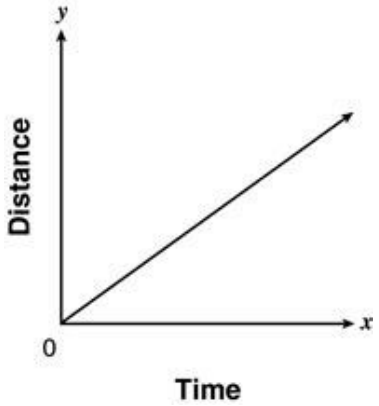
A.



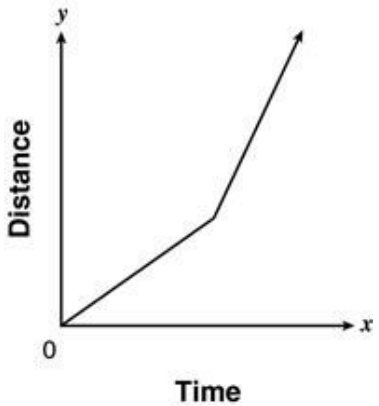
B.



C.



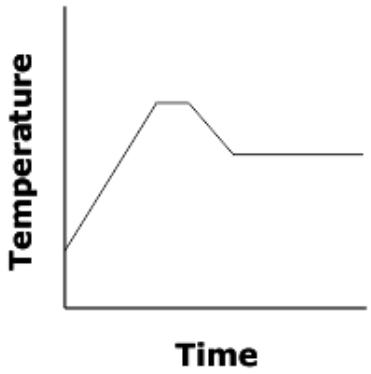
D.



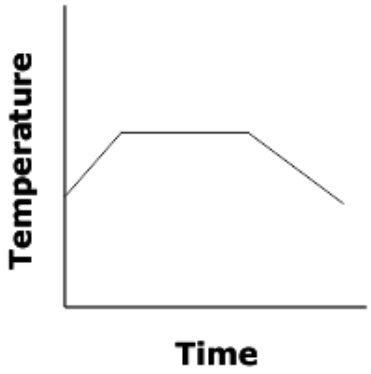
20. Joey is cooking pasta sauce for his spaghetti. He brings the sauce to a

boil and continues to boil for 5 minutes. He then reduces the heat and cooks on low for 20 minutes before serving. Which graph ***best*** represents the cooking for his sauce?

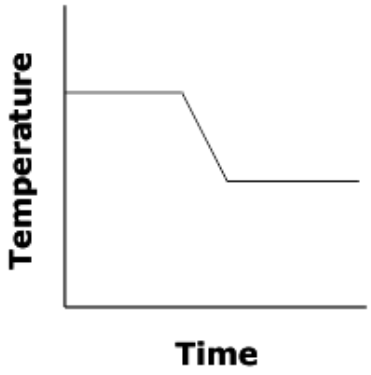
A.



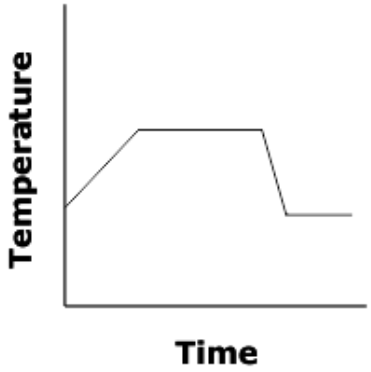
B.



C.

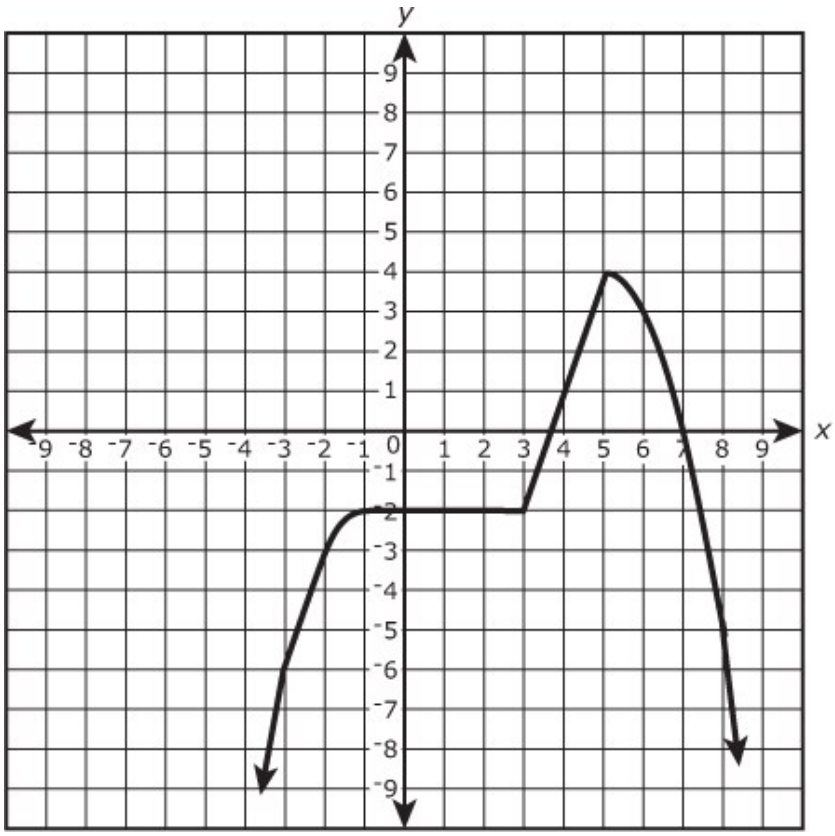


D.

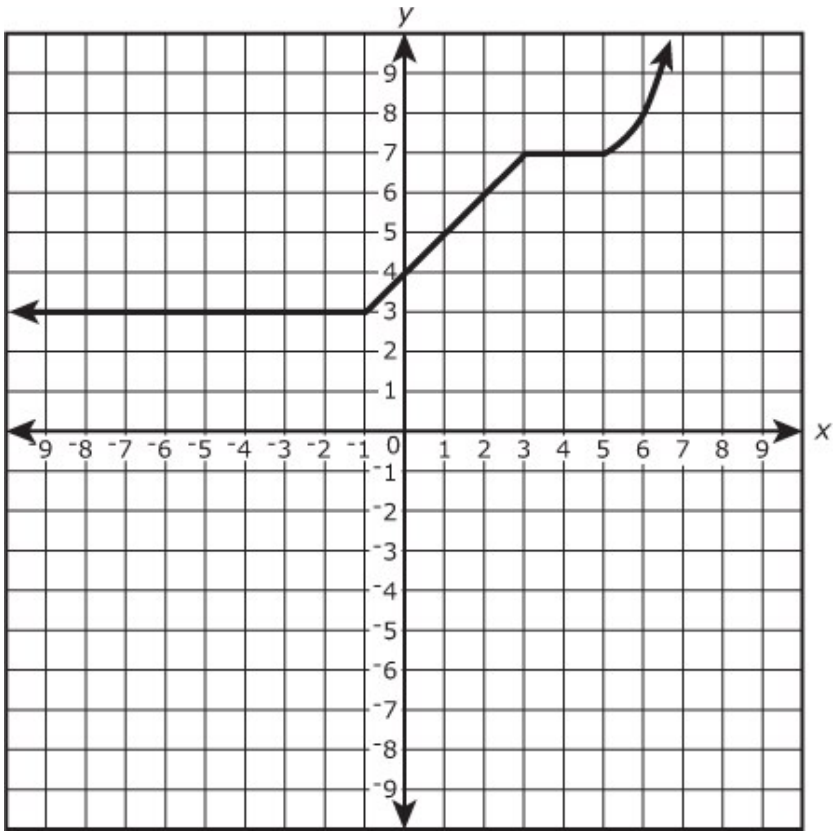


21. A function is constant over the intervals $-1 < x < 3$. The function is increasing from $3 < x < 5$. The function is decreasing over all other intervals. Which could be the graph of the function?

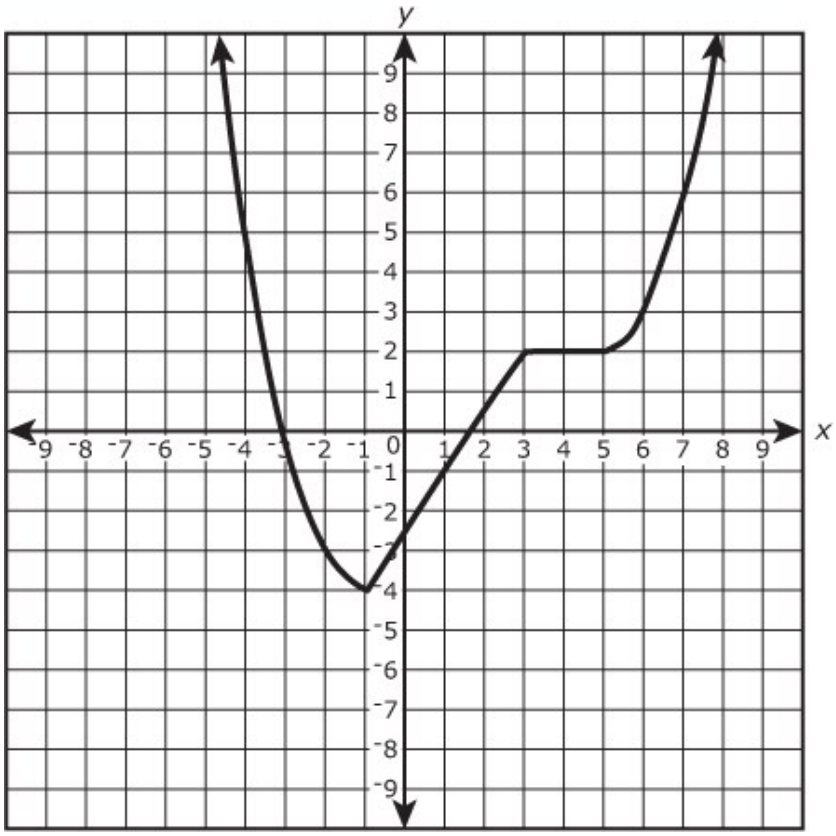
A.



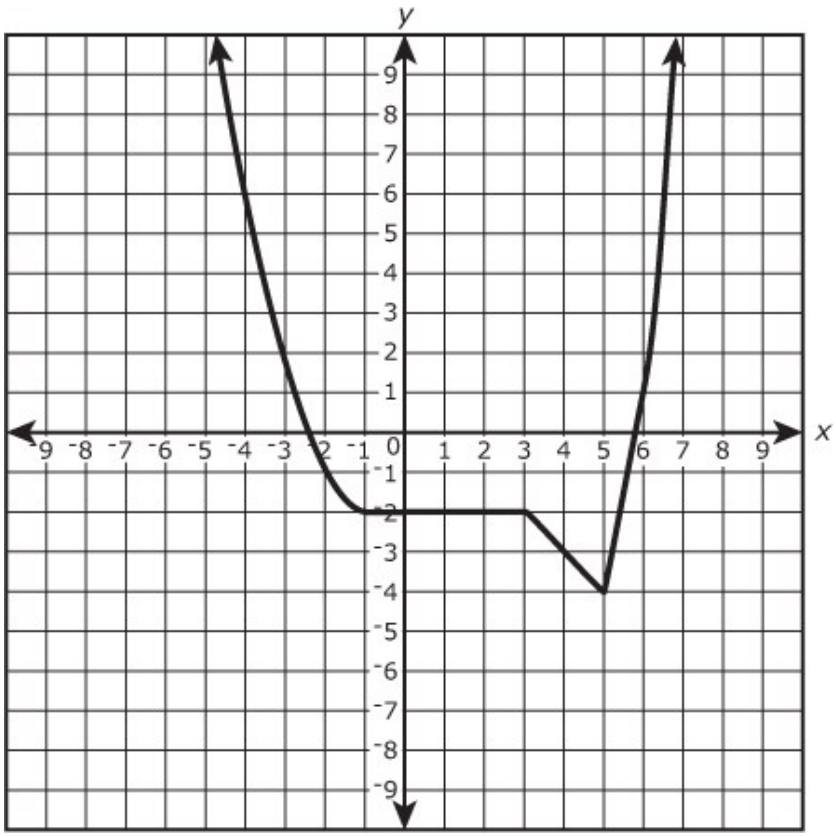
B.



C.



D.



22. **Which table does not represent a linear function?**

A.

x	*y*
–2	7
–1	4
0	1
1	–2
2	–5

B.

x	*y*
–2	–5
–1	–2
0	1
1	4
2	7

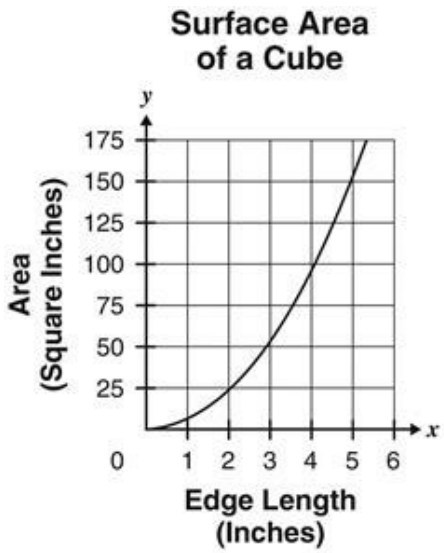
C.

x	*y*
–2	4
–1	1
0	0
1	1
2	4

D.

x	*y*
–2	–2
–1	–1
0	0
1	1
2	2

23. **The graph of the equation $y = 6x^2$ represents the surface area of the 6 faces of a cube.**



What is the total surface area, in square inches, of a 5-inch cube?

A. 100
B. 125
C. 150
D. 175

24. **Which statement correctly describes the behavior of the graph of $x = -3$ in the *xy*-plane?**

A. The graph is a vertical line.
B. The graph is a horizontal line.
C. The graph is rising as *x* increases.
D. The graph is falling as *x* increases.

25. **Which table of values does not represent a linear function?**

A.

x	*y*
–2	–2
–1	–1
0	0
1	1
2	2

B.

x	*y*
–2	2
–1	1
0	0
1	–1
2	–2

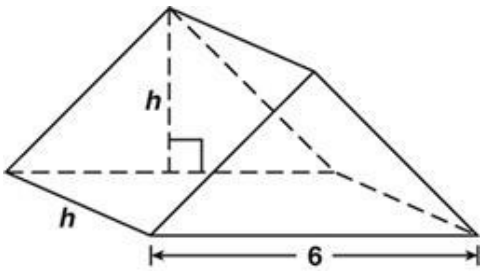
C.

x	*y*
–2	–2
–1	–2
0	–2
1	–2
2	–2

D.

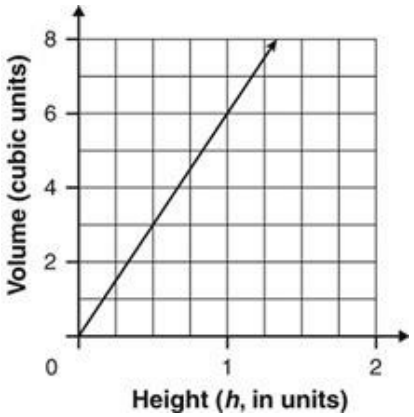
x	*y*
–2	2
–2	–2
–1	1
–1	–1
0	0

26. **The height of the prism is the same as the height of its triangular base.**

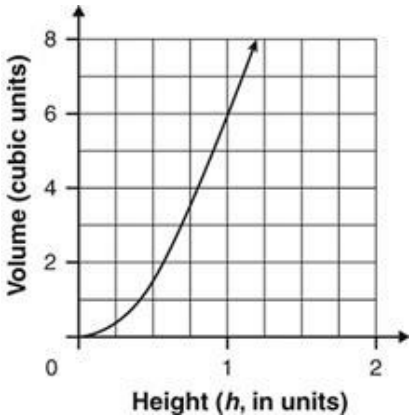


Which graph shows the volume of the prism as *h* increases?

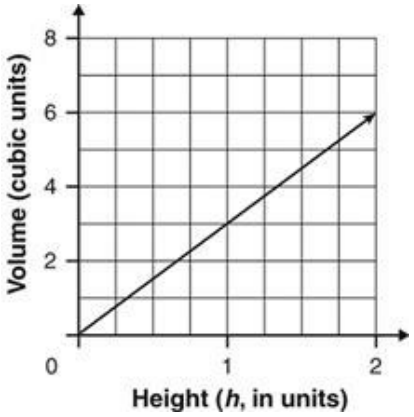
A.


Volume (cubic units)
8
6
4
2
0
1
2
Height (h, in units)

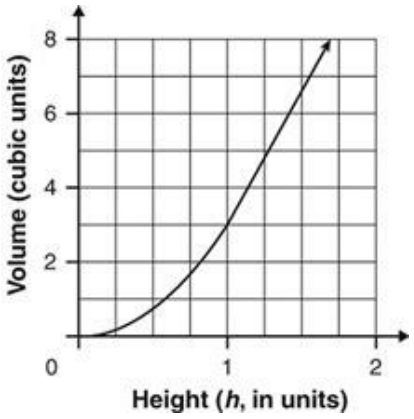
B.


Volume (cubic units)
8
6
4
2
0
1
2
Height (h, in units)

C.

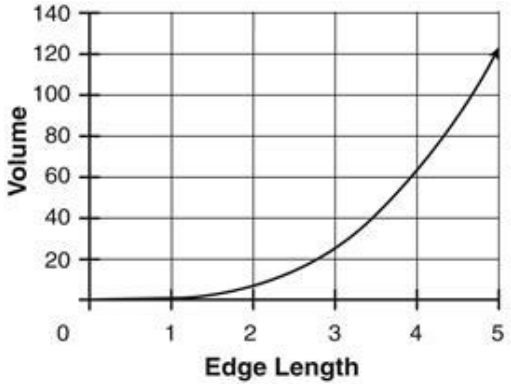

Volume (cubic units)
8
6
4
2
0
1
2
Height (h, in units)

D.

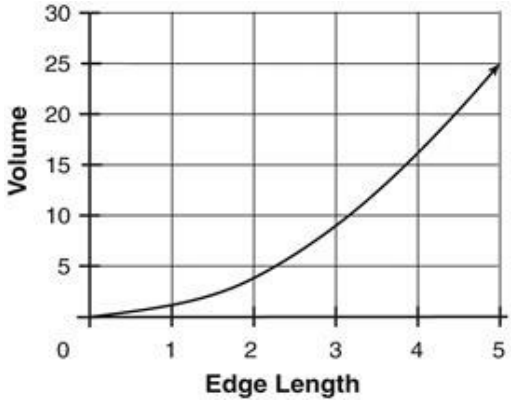

Volume (cubic units)
8
6
4
2
0
1
2
Height (h, in units)

27. **Which graph correctly plots the values of the volume of a cube as all edge lengths are increased?**

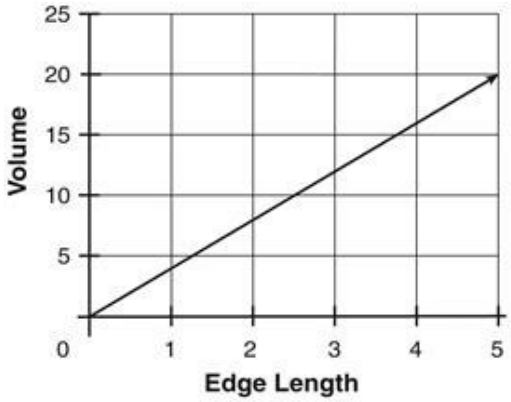
A.



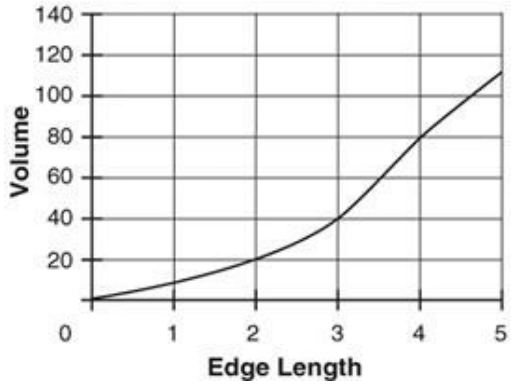
B.



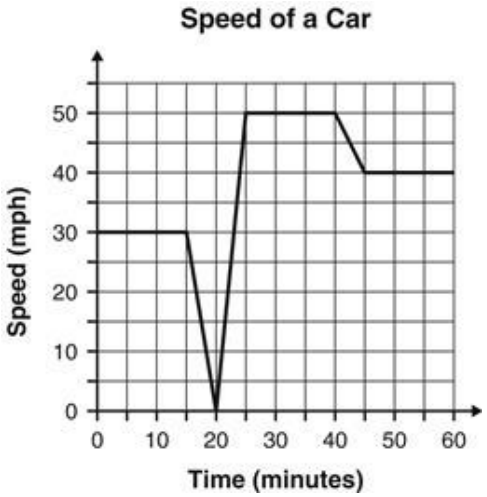
C.



D.



28. **The graph shows different speeds, in miles per hour (mph), of a car traveling on a trip.**



How fast was the car traveling in miles per hour (mph) between 25 minutes and 40 minutes?

A. speeds between 20 mph and 50 mph
B. speeds between 35 mph and 0 mph
C. a constant speed of 40 mph
D. a constant speed of 50 mph

29. **The tables show telephone charges for different companies. Which table shows a linear relationship between the length of the call and the cost?**

A. Telephone Charges

Length of Call (minutes)	Cost of Call (cents)
5	10
10	30
15	60
20	100

B. Telephone Charges

Length of Call (minutes)	Cost of Call (cents)
5	15
10	25
15	75
20	80

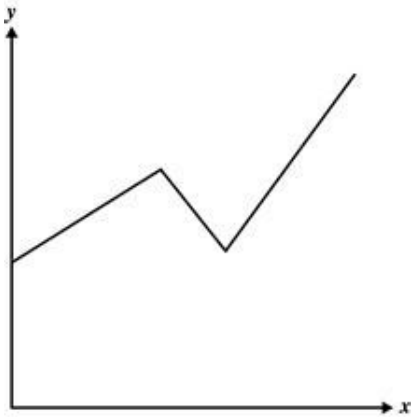
C. Telephone Charges

Length of Call (minutes)	Cost of Call (cents)
5	5
10	10
15	45
20	80

D. Telephone Charges

Length of Call (minutes)	Cost of Call (cents)
5	25
10	50
15	75
20	100

30. **The graph below shows the relationship between two variables.**



Which scenario is best represented by the graph?

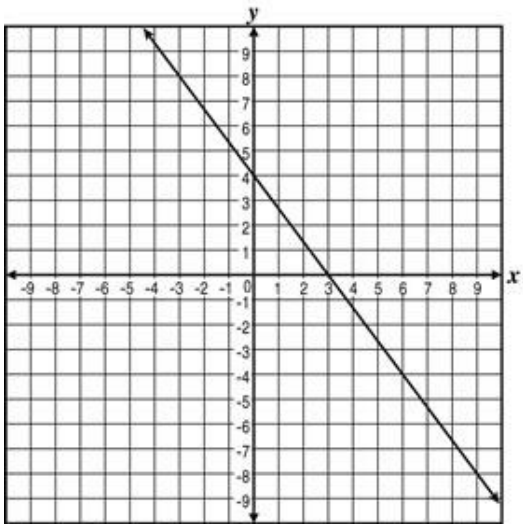
A. David drove at a constant speed before slowing down in a school zone. He then increased the speed of his car.

B. The number of perfect test scores by students in a math class increased from the first to the second grading period and then began to decline.

C. After a period of slow growth, the height of a plant remained the same for 2 weeks. It was then fertilized and began to rapidly increase in height.

D. The number of employees at a store increased at a constant rate for 5 years. There was a decrease in the number of employees for 2 years. Then the number of employees increased at a greater constant rate for the next few years.

31. **What is true about this graph?**



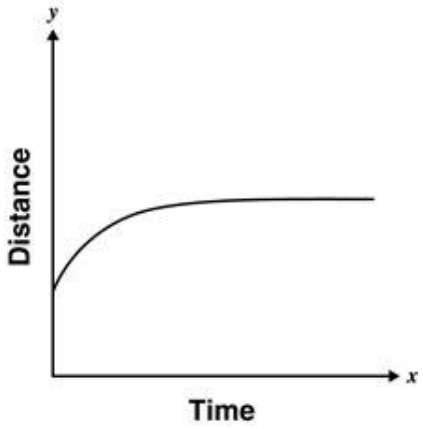
A. *y* decreases as *x* increases

B. *y* increases as *x* increases

C. *x*-values remain constant

D. *y*-values remain constant

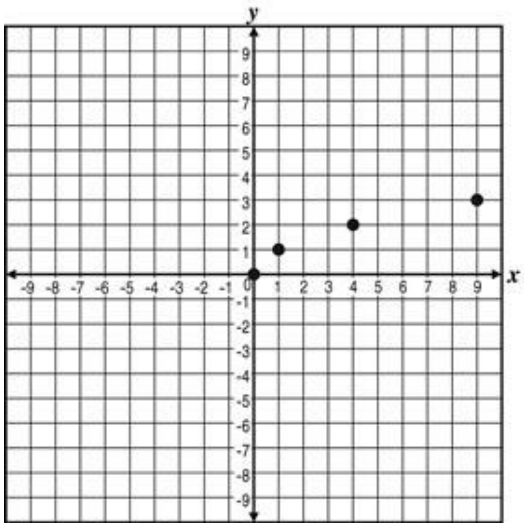
32. **Which scenario best describes the graph shown below?**



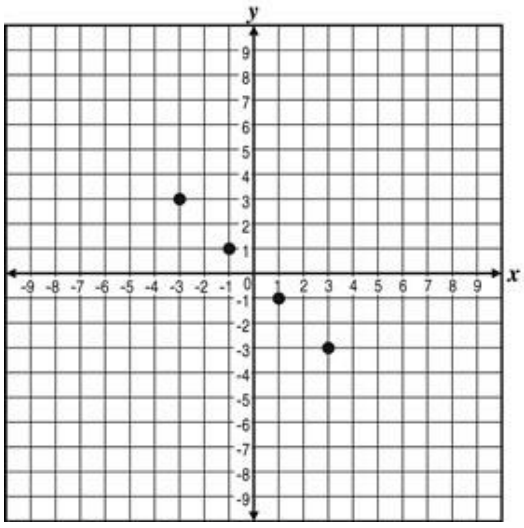
A. An airplane is parked at a maintenance facility.
B. A person on a bicycle rides at a constant speed.
C. A train gradually gains speed when leaving a station.
D. A truck gradually slows down and stops for the night.

33. **Which coordinate plane contains plotted points that represent the graph of a nonlinear function?**

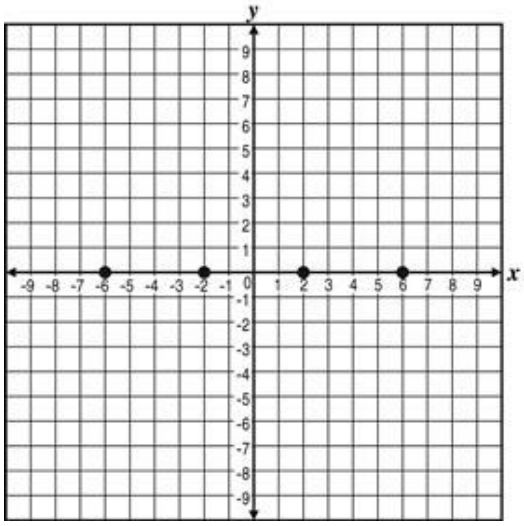
A.



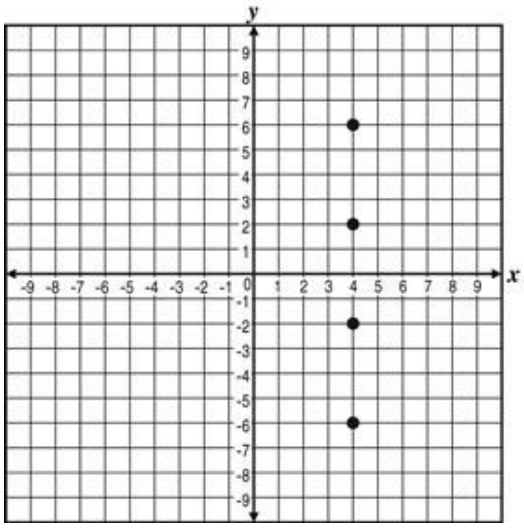
B.



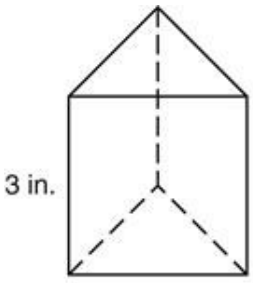
C.



D.

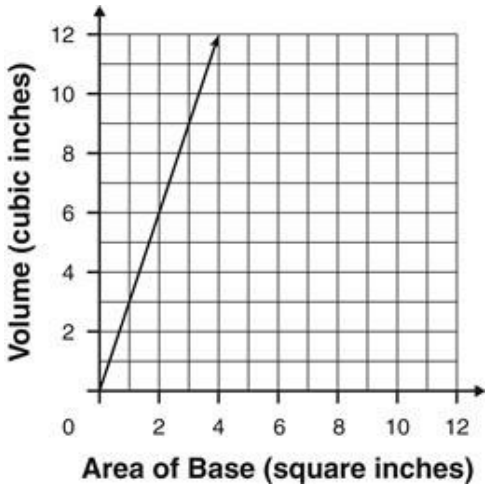


34. **A triangular prism has a height of 3 inches and a base that is an equilateral triangle.**

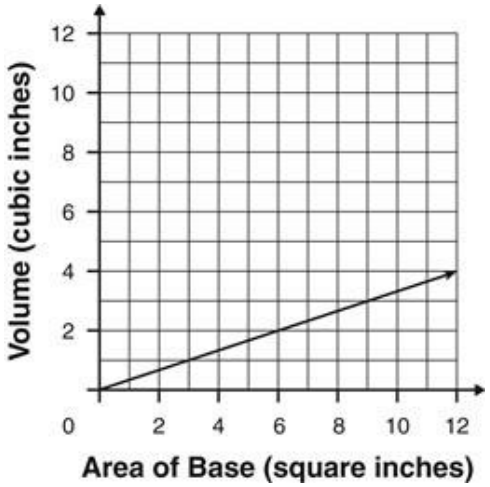


Which graph represents the volume of the triangular prism as the area of the base increases?

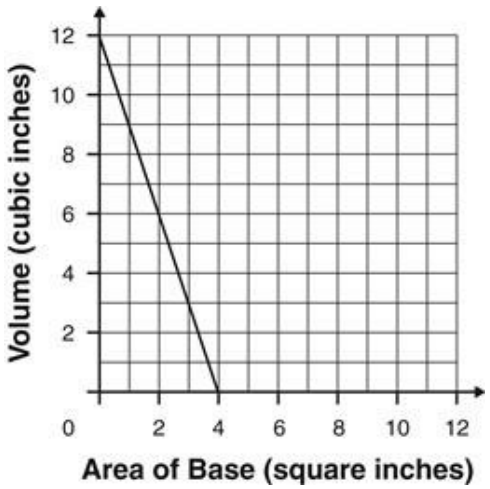
A.


Volume (cubic inches)
0
2
4
6
8
10
12
Area of Base (square inches)

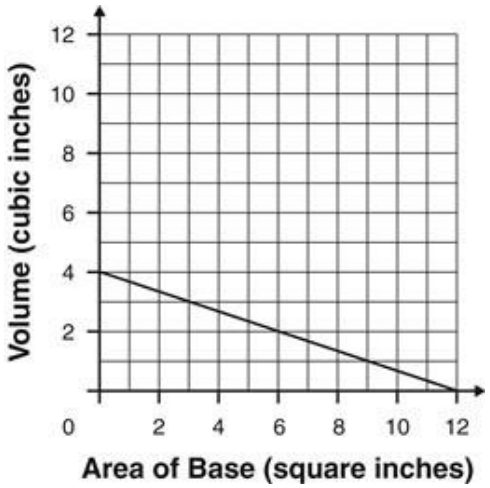
B.


Volume (cubic inches)
0
2
4
6
8
10
12
Area of Base (square inches)

C.

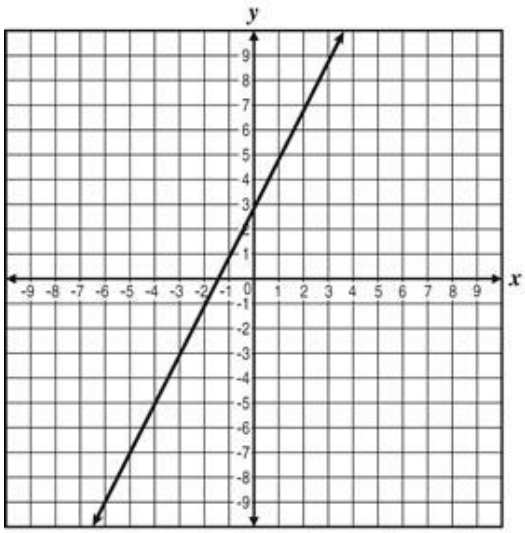

Volume (cubic inches)
0
2
4
6
8
10
12
Area of Base (square inches)

D.

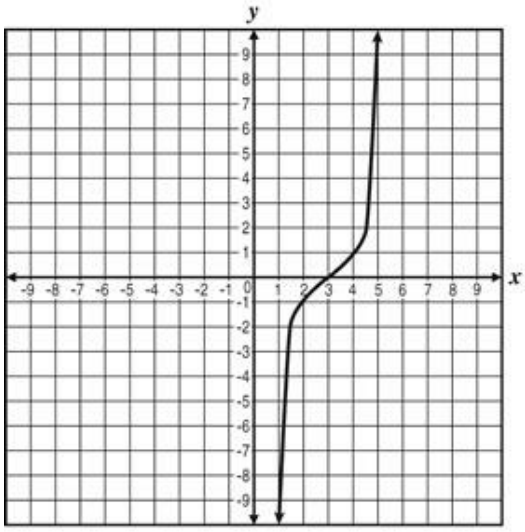


35. **Which graph shows a nonlinear relationship?**

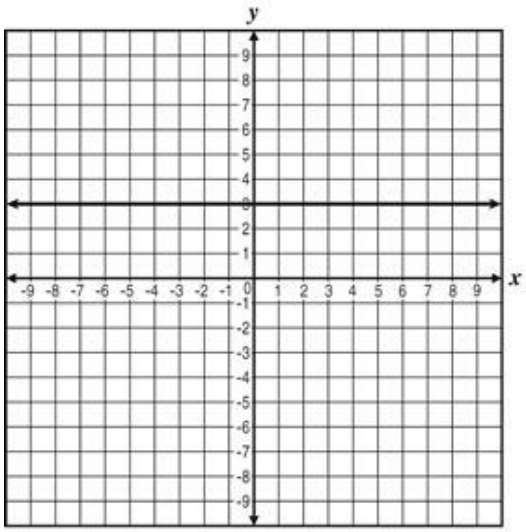
A.



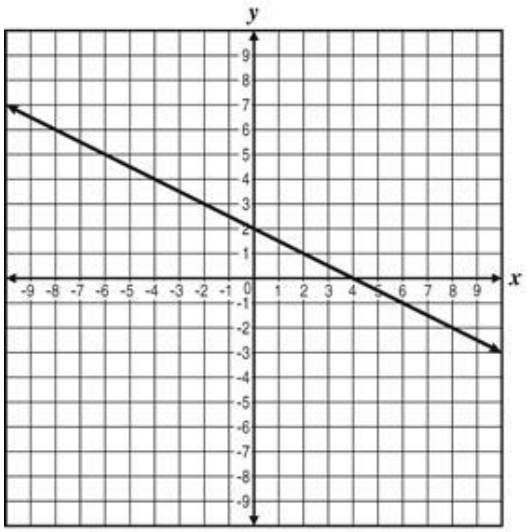
B.



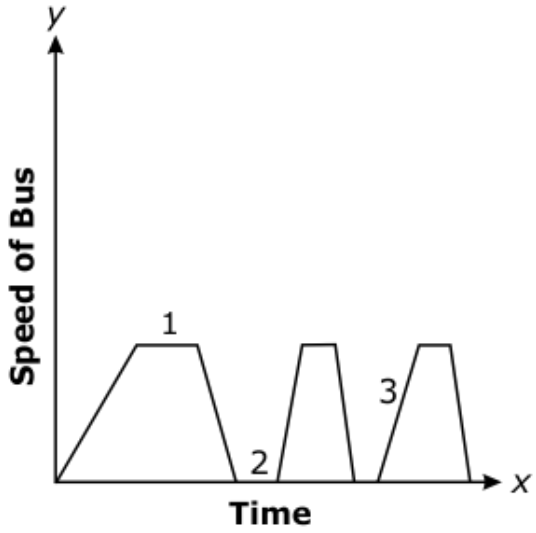
C.



D.



36. The graph below shows a student's bus ride to school.



Which scenario ***best*** represents part 2 on the graph?

A. The bus is stopped to pick up students.

B. The bus is traveling at a constant speed.

C. The bus is increasing speed at a constant rate.

37. **The table below shows the number of dogs Sonya groomed in one day.**

Dogs Groomed in One Day

Time of Day	Dogs Groomed
8:00– 9:00	0
9:00–10:00	1
10:00–11:00	2
11:00–12:00	0
12:00–1:00	0
1:00–2:00	1
2:00–3:00	3
3:00–4:00	4

Which graph best represents the relationship between these times and the number of dogs groomed?

A.


Dogs Groomed
in One Day
Number
of Dogs
y
x
Time of the Day

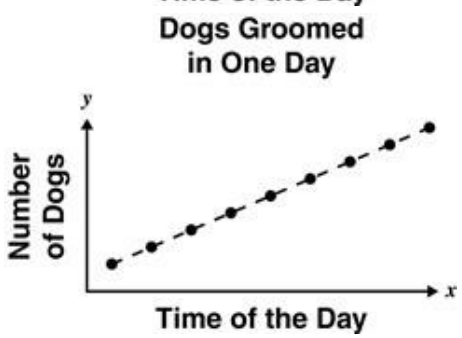
B.


Dogs Groomed
in One Day
Number
of Dogs
y
x
Time of the Day

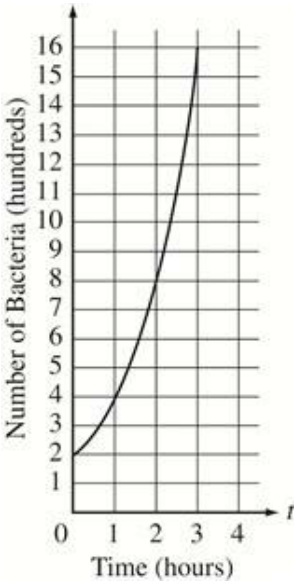
C.


Dogs Groomed
in One Day
Number
of Dogs
y
x
Time of the Day

D.


Dogs Groomed
in One Day
Number
of Dogs
y
x
Time of the Day

38. **The graph below shows the growth of bacteria over time.**

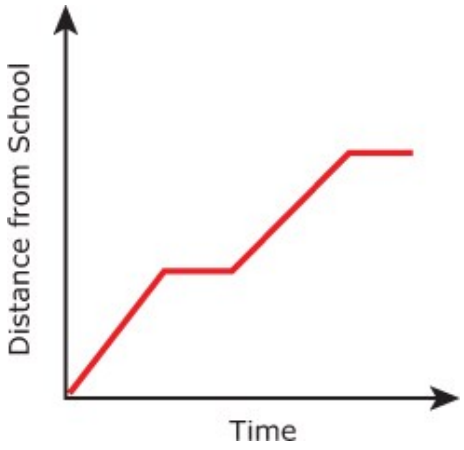


How many bacteria were present when $t = 2$?

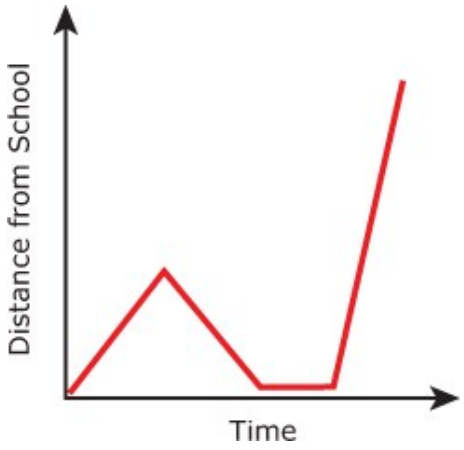
A. 200
B. 400
C. 800
D. 1,600

39. Clarice was walking home from school when she remembered she left her math book at school. She turned around and walked back to school to pick up her book. Clarice waited for the bus and rode it home. Which graph **best** models this entire trip?

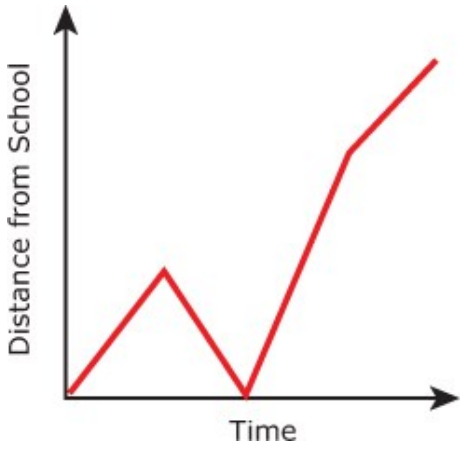
A.



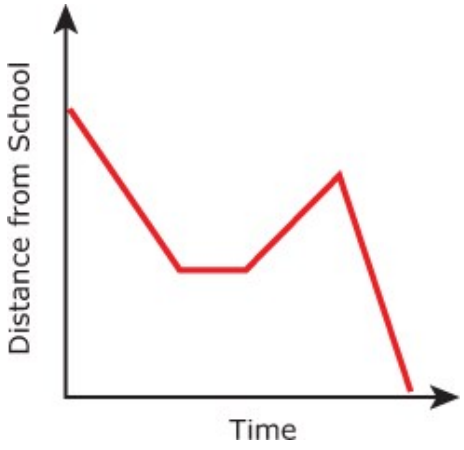
B.



C.



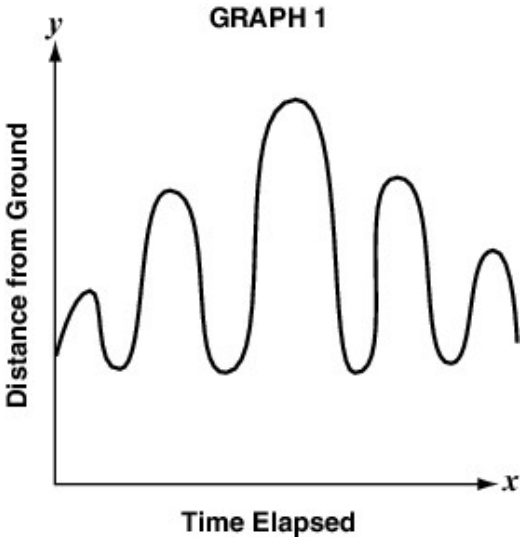
D.

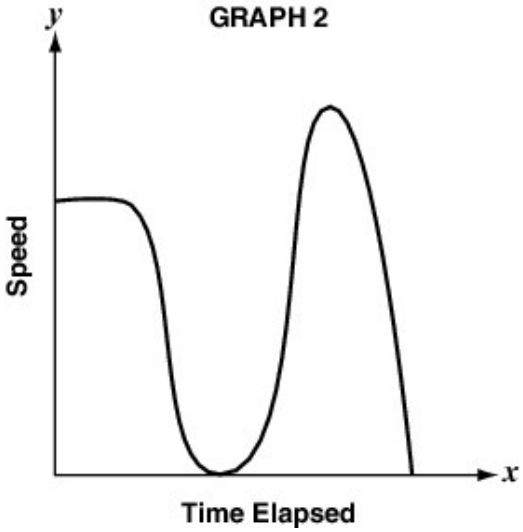


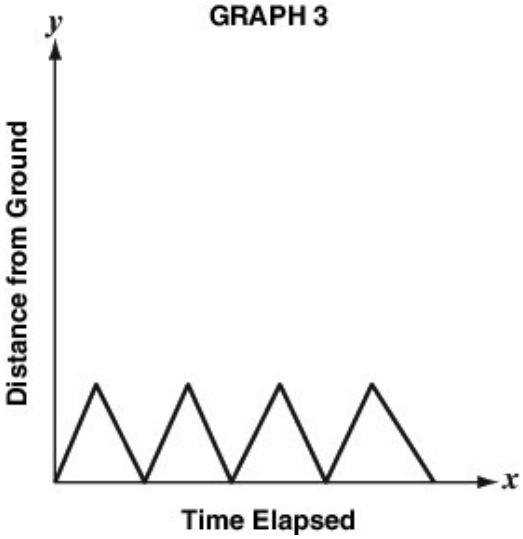
40. Samantha takes her sister Bethany to the playground. While they are there, they do the following activities:

- Bethany rides on the seesaw.
- Samantha pushes Bethany on the swing.
- Bethany climbs up the ladder and slides down the slide.

When they get home, Samantha and her dad make qualitative graphs to show the activities Bethany did. The graphs are shown below.







Part A. Which graph represents Bethany's ride on the seesaw? Explain or show your reasoning.

Part B. Which graph represents Bethany's ride on the swing? Explain or show your reasoning.

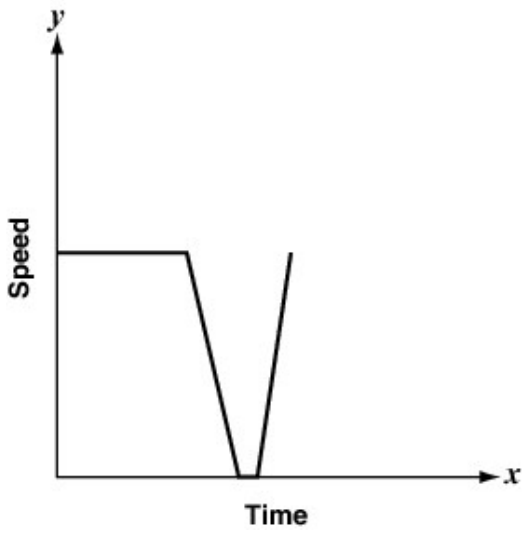
Part C. Which graph represents Bethany's ride on the slide? Explain or show your reasoning.

Part D. Sometimes Bethany likes to swing across the monkey bars. She usually drops down to the ground about halfway across, and Samantha lifts her back up to finish. Draw a qualitative graph below showing Bethany's usual trip across the monkey bars. Use "Time Elapsed" for the *x*-axis and "Distance from Ground" for the *y*-axis. Explain or show how you know your graph is **correct**.

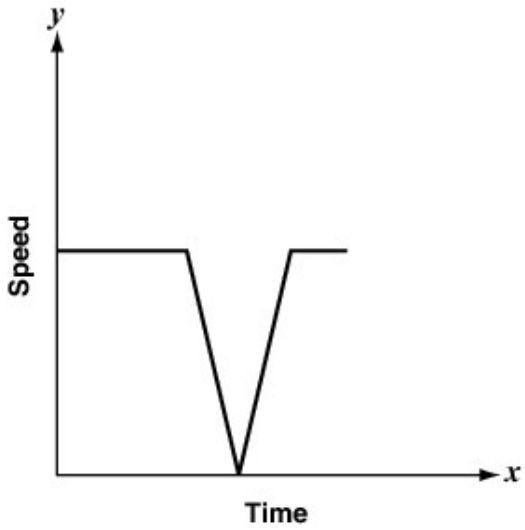
Use words, numbers, and/or pictures to show your work.

41. Jana is running a 10K race. She starts out at a steady pace and then slows down and stops to have some water. She then starts again, increasing her speed for a small distance, and then runs at a steady pace. Which graph **best** represents the situation?

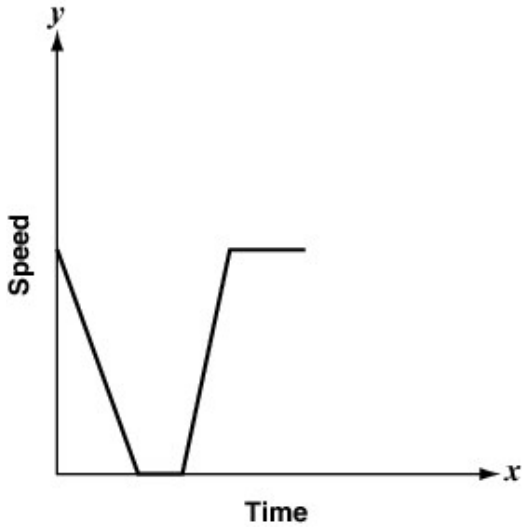
A.



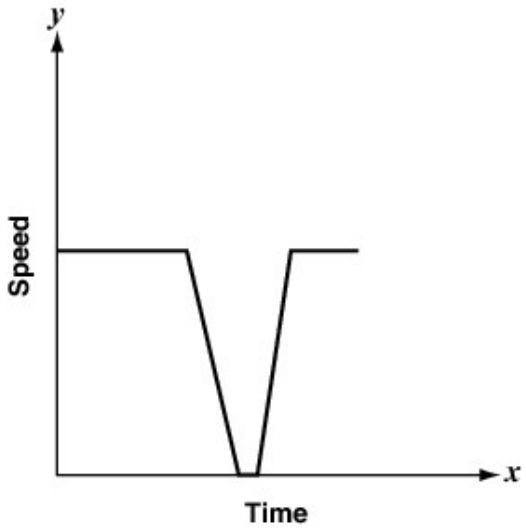
B.



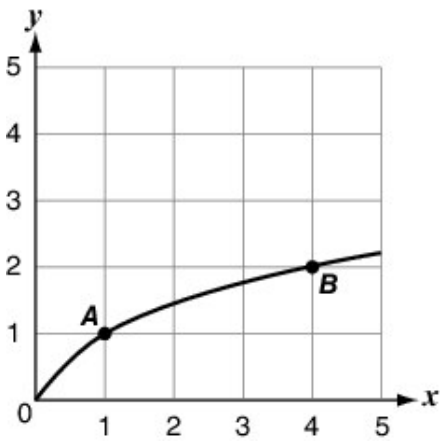
C.



D.



42. Which statement **best** describes the function below between points A and B?



A. The function is increasing and linear.

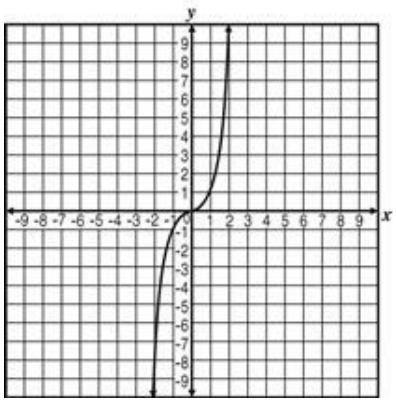
B. The function is decreasing and linear.

C. The function is increasing and nonlinear.

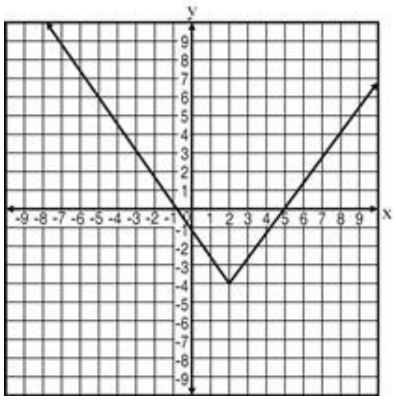
D. The function is decreasing and nonlinear.

43. **Which graph represents a linear function?**

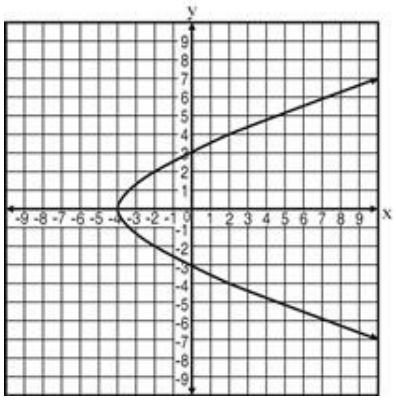
A.



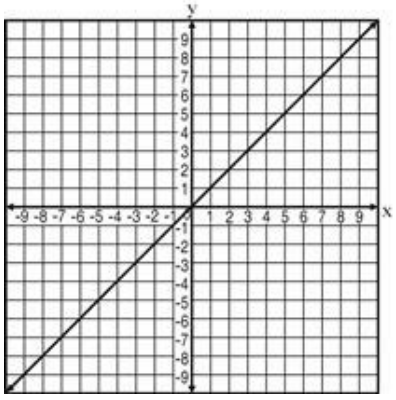
B.



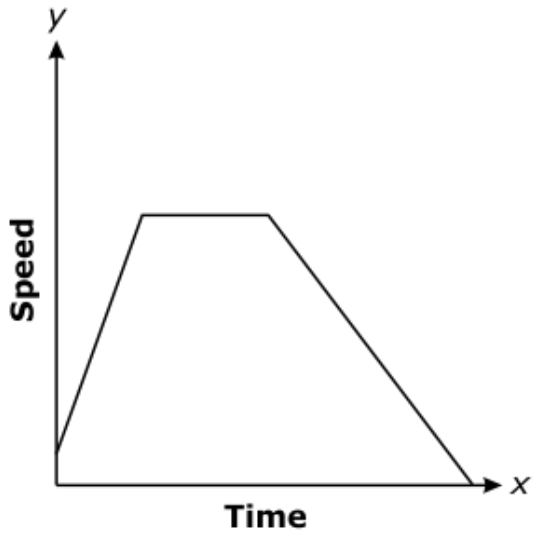
C.



D.



44. Which scenario would ***best*** match the graph below?



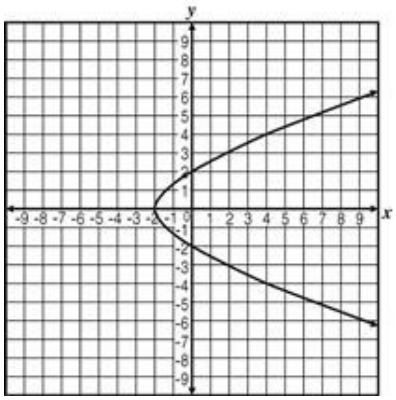
A. The speed of a skier riding to the top of a mountain and skiing down to the bottom.

B. The speed of a child going up to the top of a slide, sitting there for a while, and sliding down the other side.

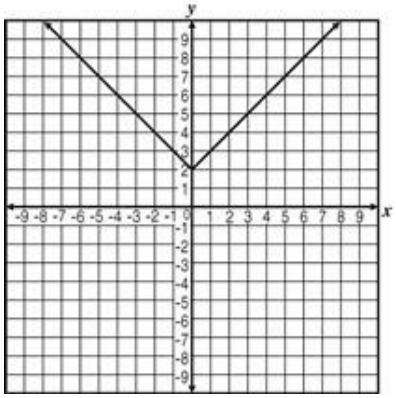
C. The speed of a driver entering the interstate highway, driving at a constant speed, and then exiting the interstate highway.

45. **Which graph represents a linear function?**

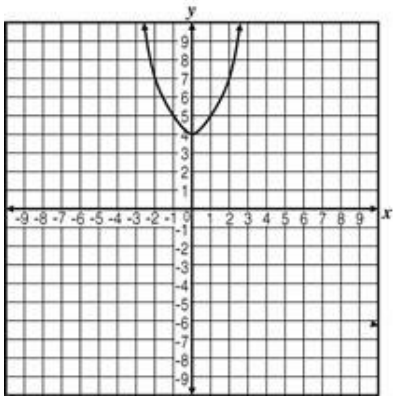
A.



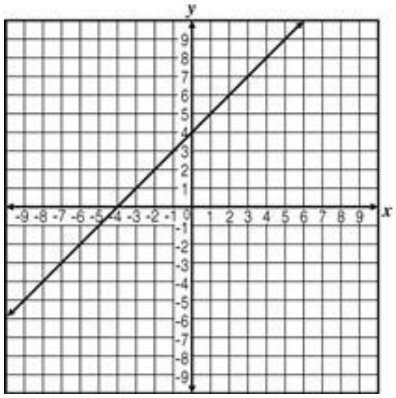
B.



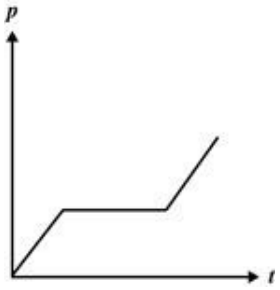
C.

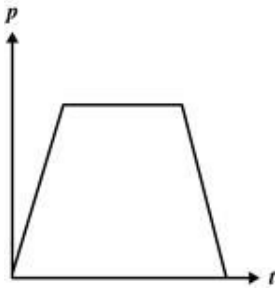


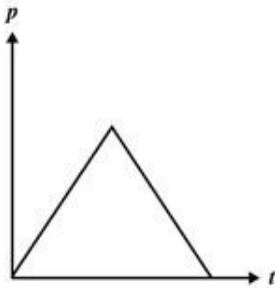
D.

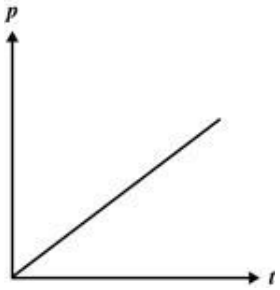


46. **In the warm-up phase, the output production of a machine increased at a steady rate. It then began producing at a constant rate. When it neared production goal, it automatically decreased the production rate as it cooled off. Which graph best represents the relationship between the production (*p*) as a function of time (*t*)?**

A. 

B. 

C. 

D. 

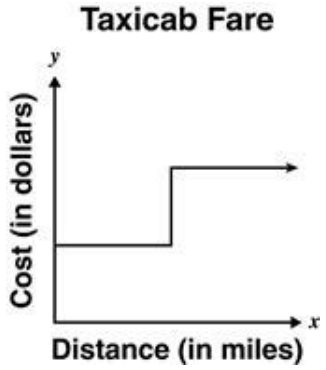
47. **The table shows the cost of a taxicab ride for several driving distances.**

Taxicab Fare

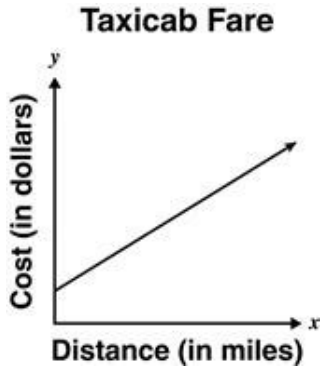
Distance (in miles)	1	2	4	10
Cost (in dollars)	$5	$7	$11	$23

Which graph best represents the relationship between the cost and the distance?

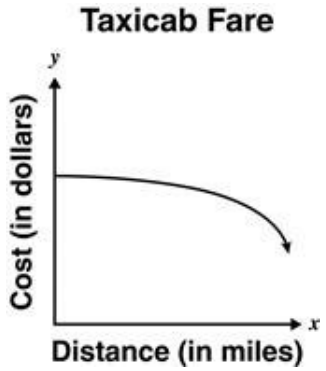
A.



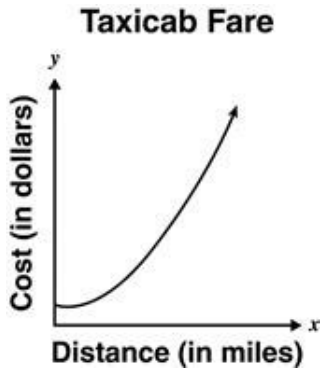
B.



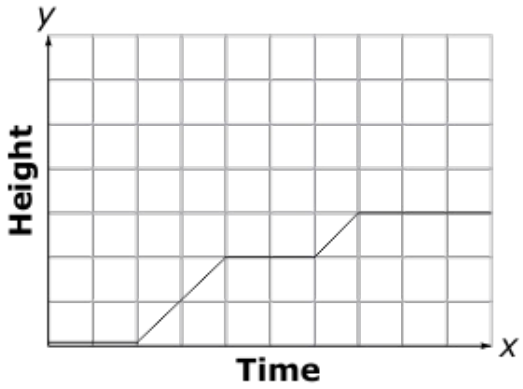
C.



D.



48. The graph below represents a Height (y) vs. Time (x) of an object.



Which scenario ***best*** matches the graph?

A. A plane takes off, flies at a certain altitude, then lands.

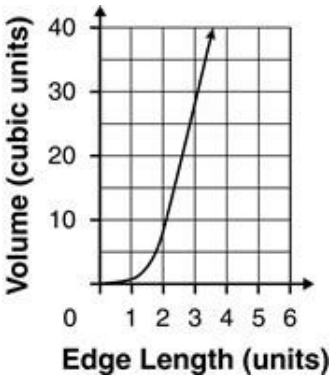
B. A plane taxis on the run way, lifts off, ascends to a certain altitude, and flies for a while.

C. A plane takes off, ascends to an altitude and flies for a while, then ascends to another altitude, and flies for a while.

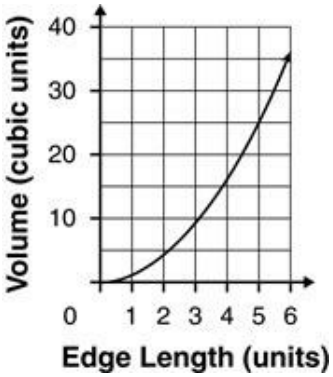
D. A plane taxis on the run way, lifts off, ascending to a certain altitude, flies for a while, ascends to a higher altitude, and flies at the new altitude.

49. **Which graph shows the volume of a cube graphed as a function of its edge length?**

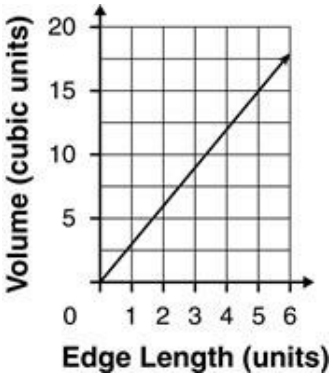
A.



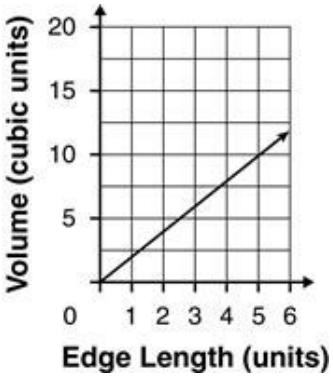
B.



C.



D.



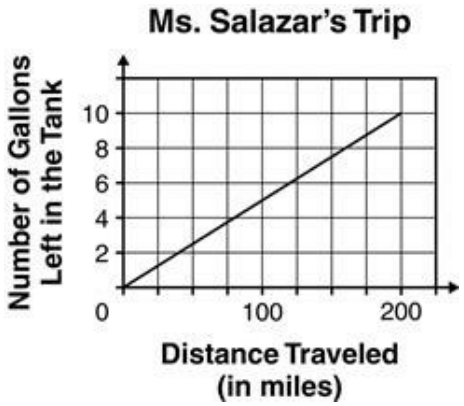
50. **The graph shows Lee's running speed during an hour-long workout.**

What total amount of time did Lee spend running at a constant speed?

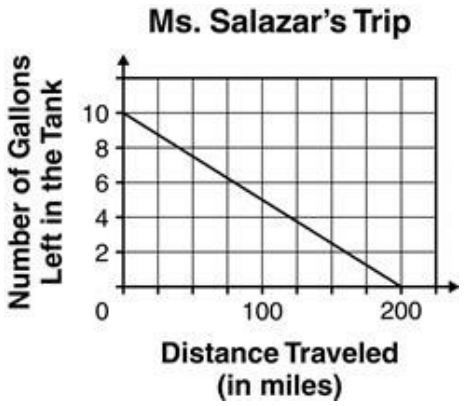
A. 10 minutes
B. 20 minutes
C. 40 minutes
D. 50 minutes

51. **Ms. Salazar's car averages 25 miles per gallon of gasoline. She filled the 10-gallon tank with gasoline before traveling 200 miles on a trip. Which graph best represents this situation?**

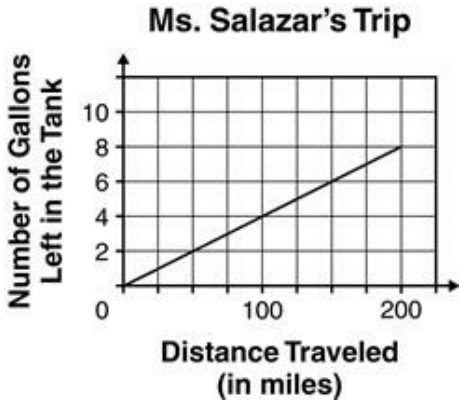
A.



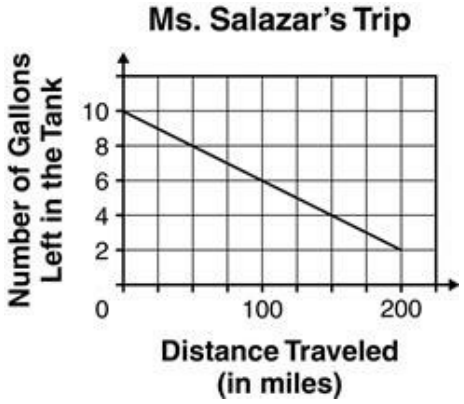
B.



C.

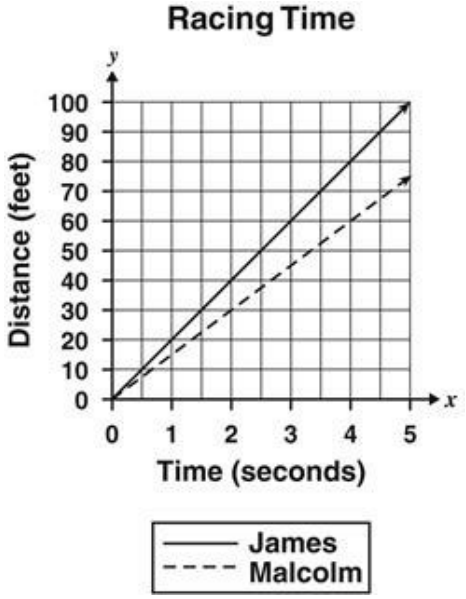


D.

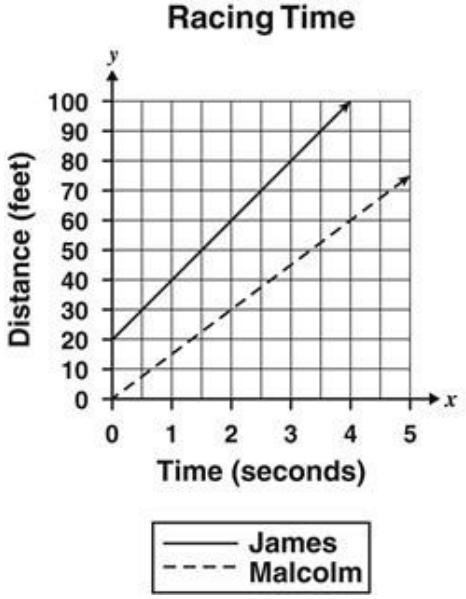


52. **James and his brother Malcolm raced home on their bicycles. James gave Malcolm a head start of 20 feet. James rode at a rate of 20 feet per second while Malcolm rode at a rate of 15 feet per second. Which graph best represents this situation?**

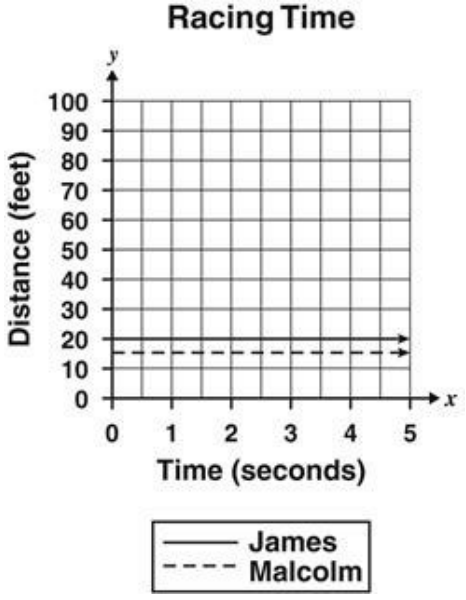
A.


Racing Time
y
100
90
80
70
60
50
40
30
20
10
0
Distance (feet)
0
1
2
3
4
5
x
Time (seconds)
James
Malcolm

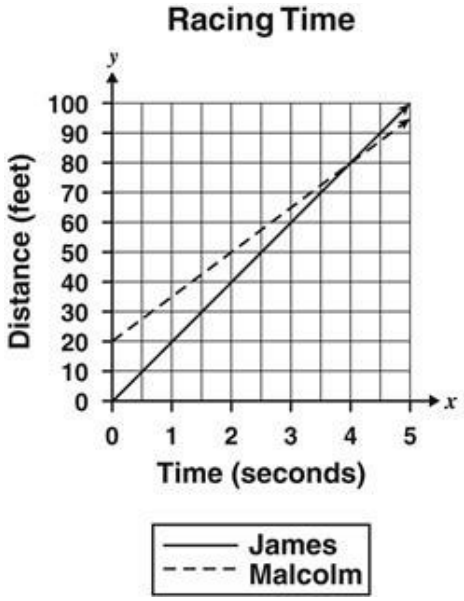
B.


Racing Time
y
100
90
80
70
60
50
40
30
20
10
0
Distance (feet)
0
1
2
3
4
5
x
Time (seconds)
James
Malcolm

C.


Racing Time
y
100
90
80
70
60
50
40
30
20
10
0
Distance (feet)
0
1
2
3
4
5
x
Time (seconds)
James
Malcolm

D.



53. **Which statement best describes the behavior of the graph of $3x - 4y = 8$?**

A. The graph is a vertical line.
B. The graph is a horizontal line.
C. The graph is rising as *x* increases.
D. The graph is falling as *x* increases.

54. **Which table of values below represents a linear relationship?**

A.

x	*y*
–8	8
–4	4
0	8
4	4
8	8

B.

x	*y*
7	7
5	7
9	7
1	7
–7	7

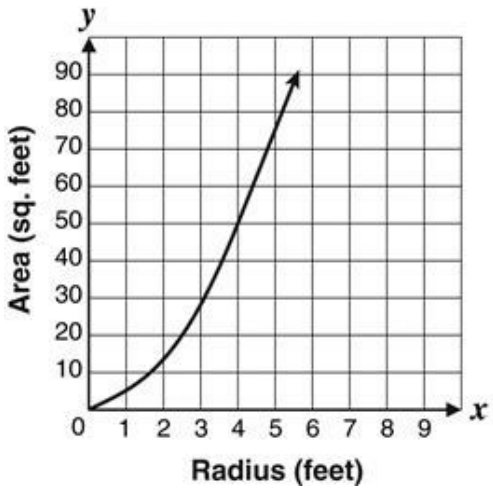
C.

x	*y*
6	2
3	4
0	7
–3	11
–6	16

D.

x	*y*
5	8
4	7
3	5
2	4
1	2

55. **The function $A = \pi r^2$ gives the area *A* of a circle with radius *r*.**

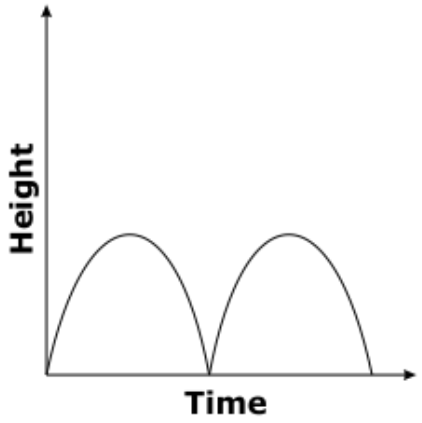


Using the graph of the function shown, which measurement is closest to the radius of a circle whose area is 45 square feet?

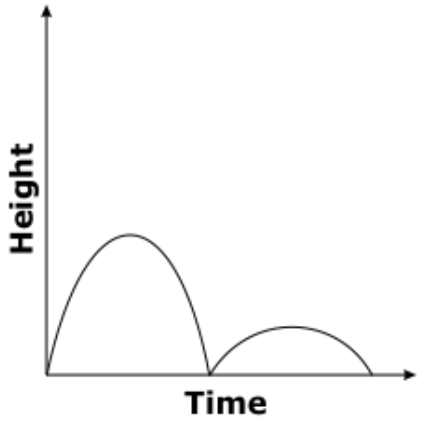
A. 2.1 feet
B. 3.3 feet
C. 3.8 feet
D. 4.2 feet

56. Bryan threw a tennis ball into the air. The ball hit the ground and bounced once before landing in a mud puddle. Which graph ***best*** models the height of the ball over time?

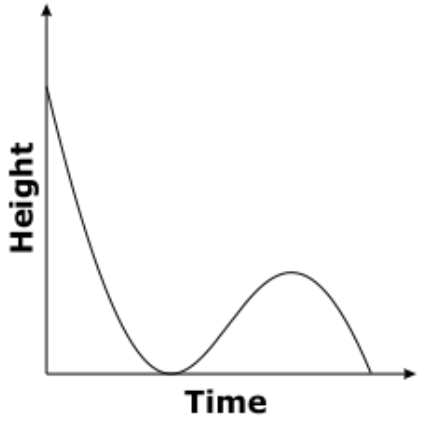
A.



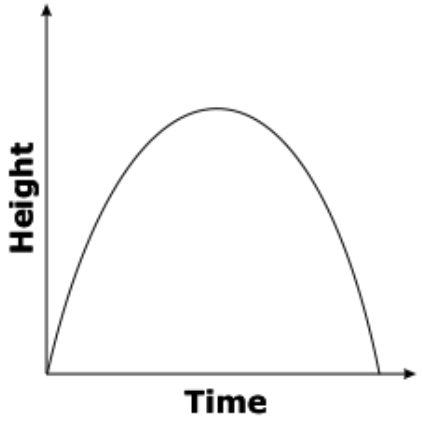
B.



C.

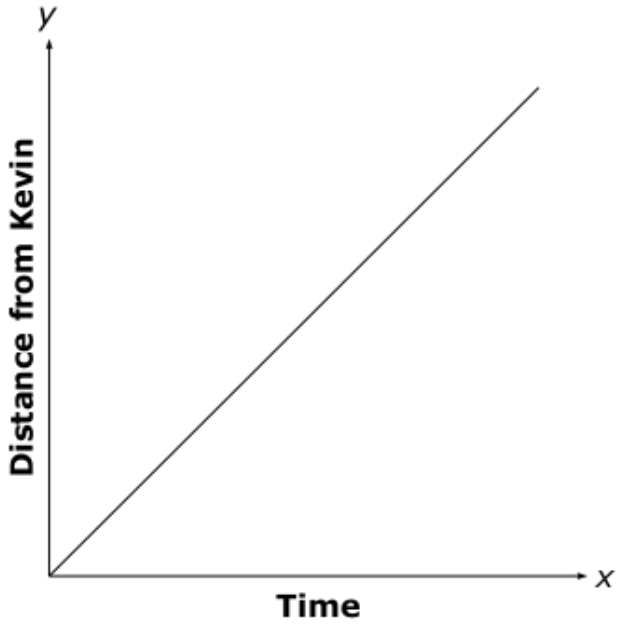


D.

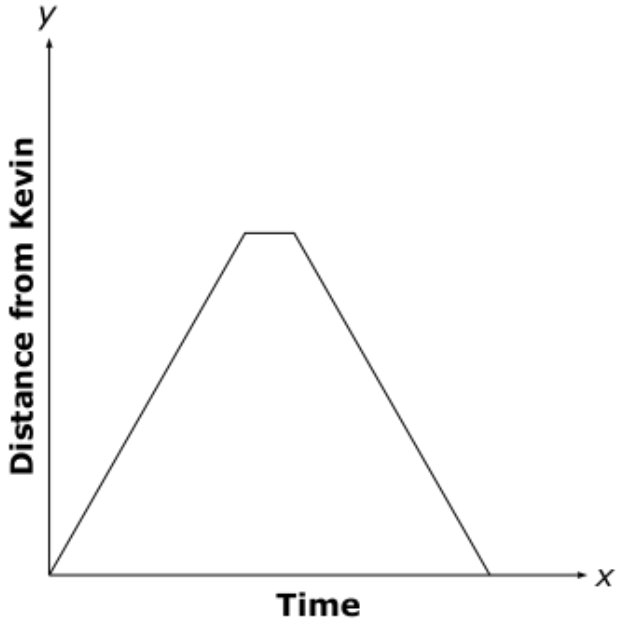


57. Kevin was playing fetch with his dog in a field. Kevin threw a stick. The dog ran to get the stick, paused, and then brought it back to Kevin. Which graph ***best*** represents the dog's distance from Kevin for this event?

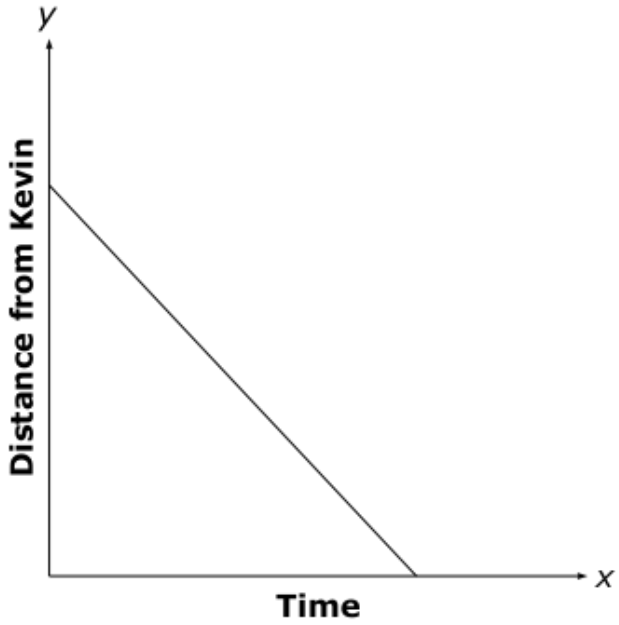
A.



B.

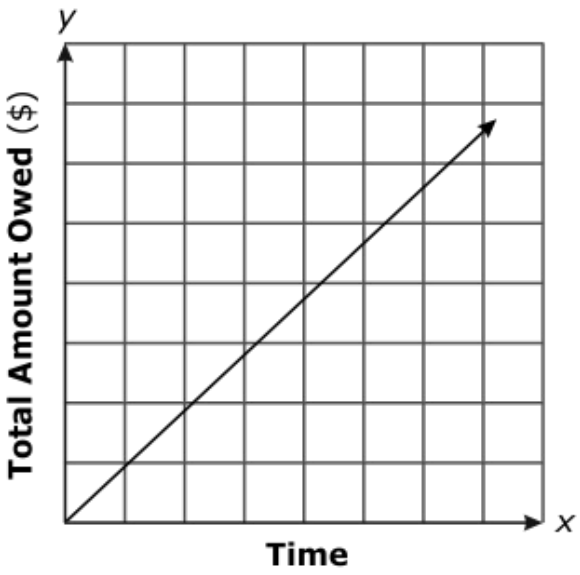


C.

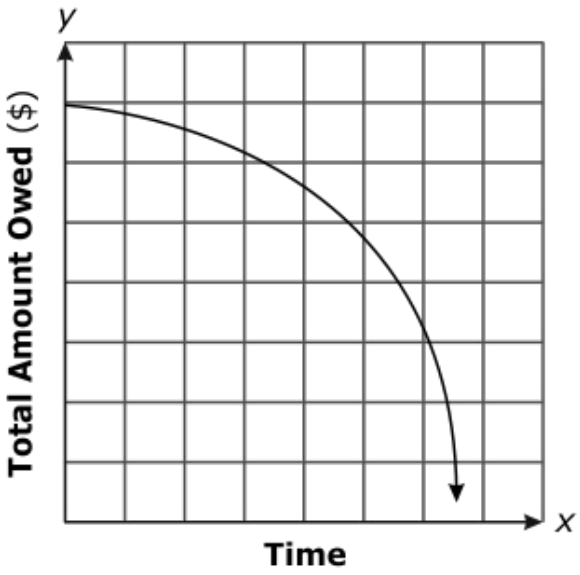


58. Quintin bought a car from his uncle. He is making equal payments each month to pay for the car. Which graph ***best*** represents the relationship between time and the amount of money Quintin still owes?

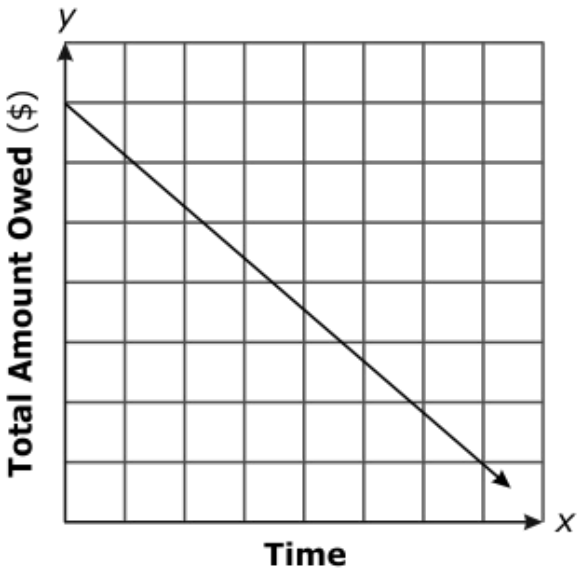
A.



B.

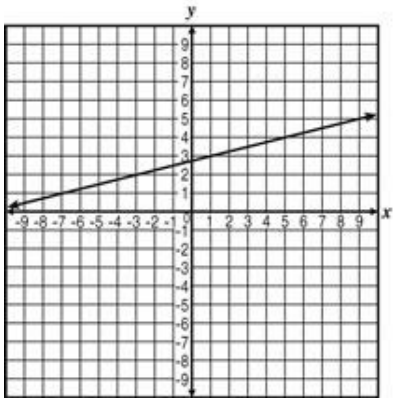


C.

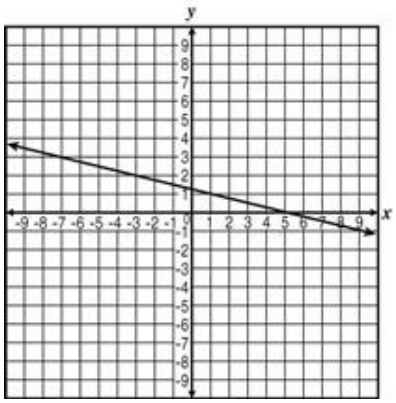


59. **A line with a slope of $\frac{1}{4}$ passes through (−3, 2). Which graph illustrates this line?**

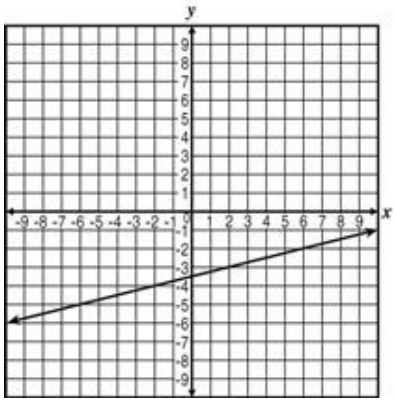
A.



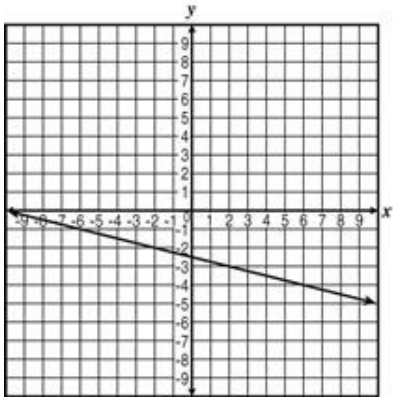
B.



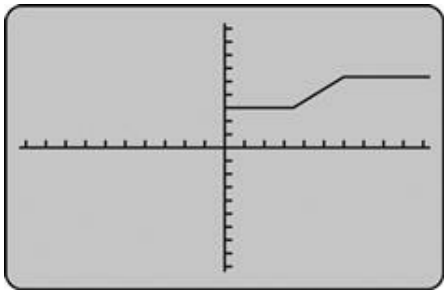
C.



D.



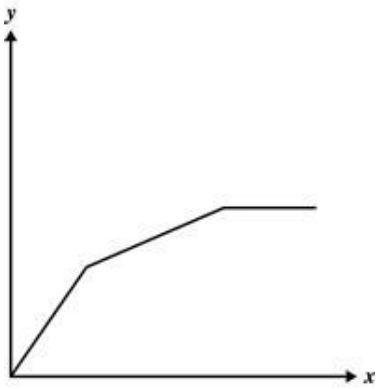
60. **The graphing calculator screen below represents time on the horizontal axis and the speed of an object on the vertical axis.**



The data graphed on the screen indicates which of the following about an object?

A. The object was at rest, then began moving, and then stopped.
B. The object moved at a constant speed, then sped up, and then stopped.
C. The object was at rest, then began moving, and then slowed down.
D. The object moved at a constant speed, then sped up, and then moved at a constant speed again.

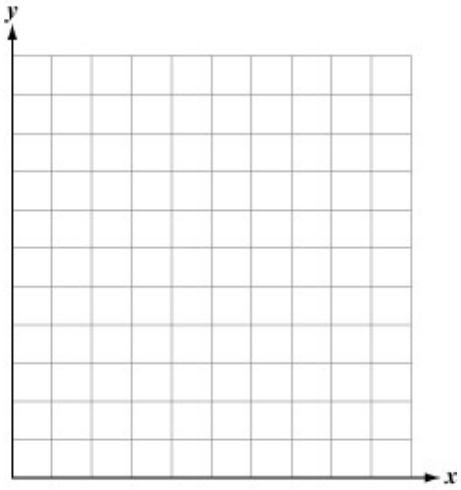
61. **Which scenario best describes the graph below?**



A. As the weight of a package increased, the shipping cost increased proportionally.
B. A race car driver accelerated quickly, stopped, accelerated again, and then stopped quickly.
C. A vacuum salesperson sold a constant number of vacuums and then experienced a steady increase in the number of vacuums sold.
D. A puppy gained weight quickly, still gained weight but not as quickly, and then stayed at a constant weight.

62. A utility company charges $0.15 per kwh (kilowatt-hour) of electricity, plus a basic connection charge of $15.00.

Part A. Graph the function described above. Make sure to label the axes and choose appropriate scales.

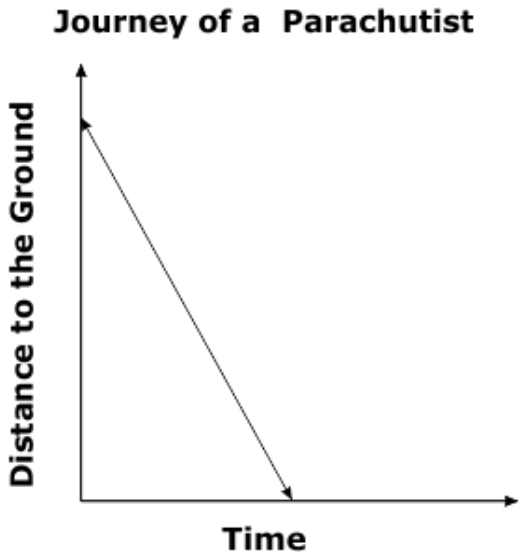


Part B. Describe whether the function is linear or nonlinear, and whether it is increasing or decreasing.

Use words, numbers, and/or pictures to show your work.

63. A parachutist will be jumping out of a plane that is in the air at a high altitude. Which graph ***best*** displays the journey of a parachutist to the ground?

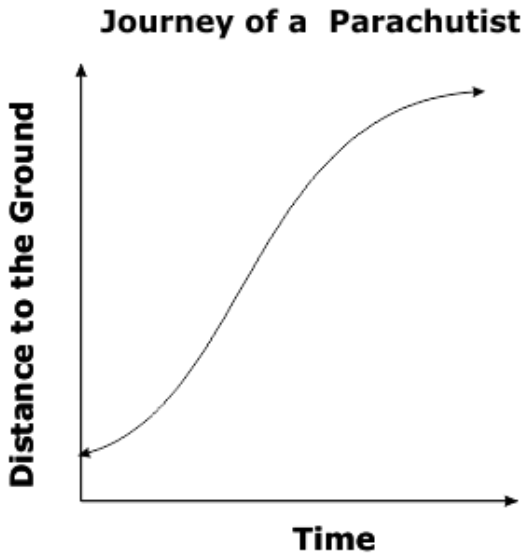
A.



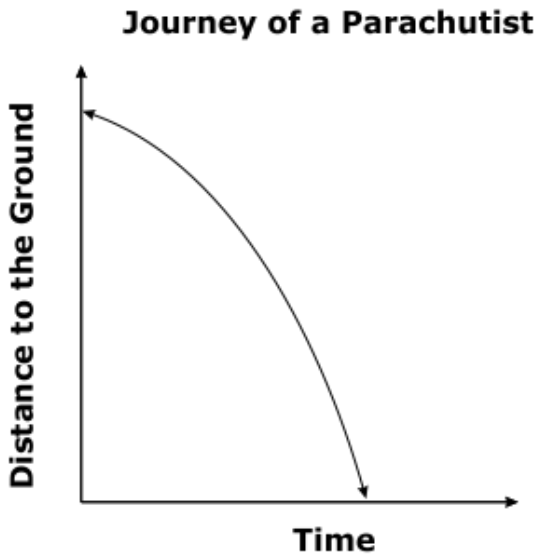
B.


Journey of a Parachutist
Distance to the Ground
Time

C.


Journey of a Parachutist
Distance to the Ground
Time

D.



64. **Which table below represents a linear function?**

A. **Table A**

x	*y*
0	0
1	1
2	$\sqrt{2}$
3	$\sqrt{3}$

B. **Table B**

x	*y*
0	2
1	4
2	6
3	8

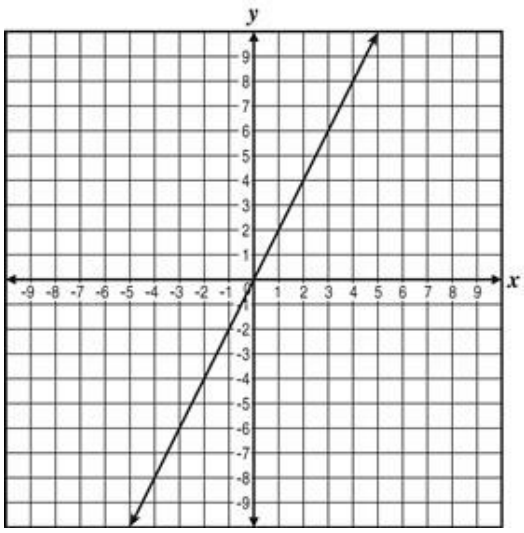
C. **Table C**

x	*y*
0	0
1	1
2	4
3	9

D. **Table D**

x	*y*
0	0
1	1
2	8
3	27

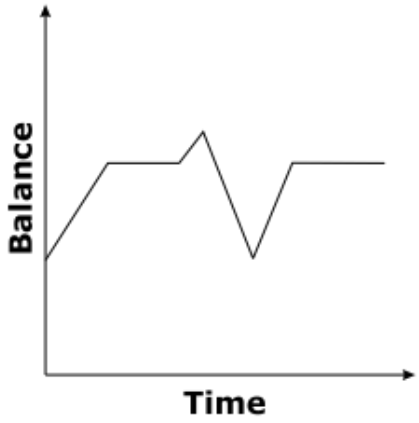
65. **This graph represents the equation** $y = 2x$.



Which statement accurately predicts the effect on the graph if the slope of the line is changed to $\frac{1}{2}$?

A. The graph is steeper but still rises.
B. The graph is not as steep but still rises.
C. The graph is steeper and no longer rises.
D. The graph is not as steep and no longer rises.

66. The graph below shows the relationship between time and the balance in a checking account over a twelve-month period.



Based on the graph, which statement is true?

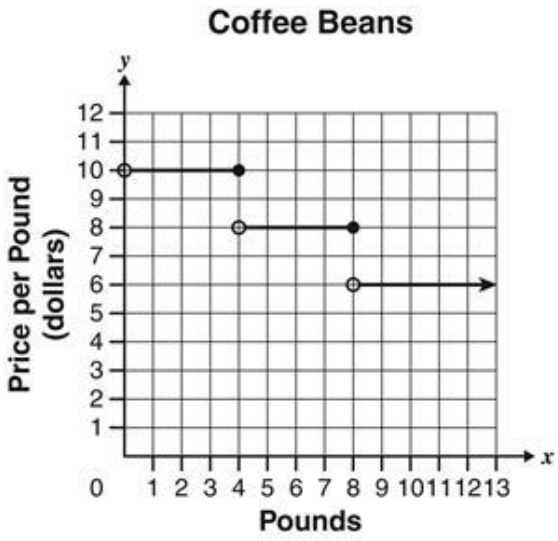
A. The balance in the account never drops below the starting balance.

B. The balance at the end of the twelve-month period is the same as the beginning balance.

C. The balance in the account increases at a steady rate, decreases at a steady rate and then levels off.

D. The balance in the account increases at the beginning, and then decreases by the end of the twelve-month period.

67. **Kara and Bill bought coffee beans based on the price structure shown in the graph below.**

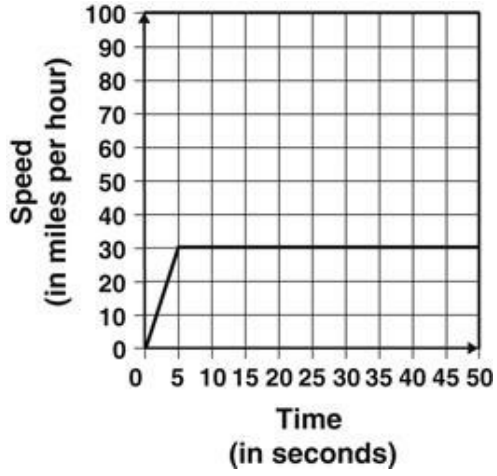


Kara bought 2 pounds of coffee beans yesterday and Bill bought 7 pounds of coffee beans today. How much money could Kara have saved if she and Bill had combined their purchases?

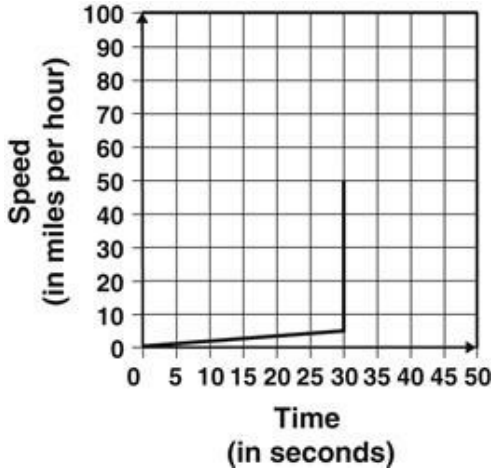
A. $4
B. $8
C. $14
D. $22

68. **A car accelerates from 0 to 30 miles per hour in 5 seconds with constant acceleration. The car continues to move at 30 miles per hour for the next 45 seconds. Which graph shows this relationship between speed and time?**

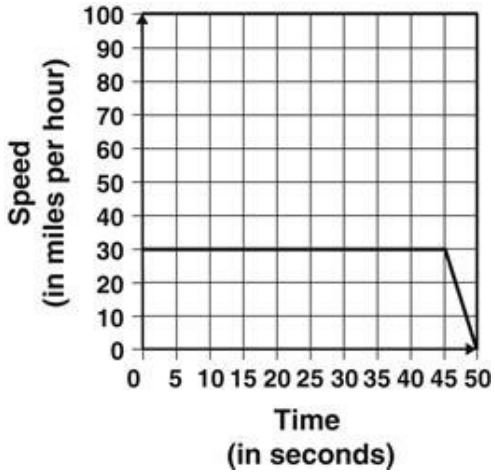
A.



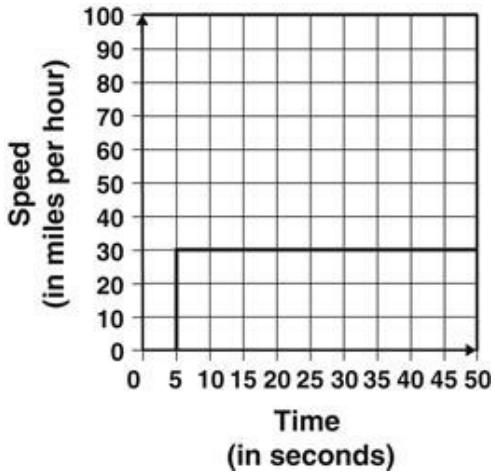
B.


Speed
(in miles per hour)
100
90
80
70
60
50
40
30
20
10
0
0 5 10 15 20 25 30 35 40 45 50
Time
(in seconds)

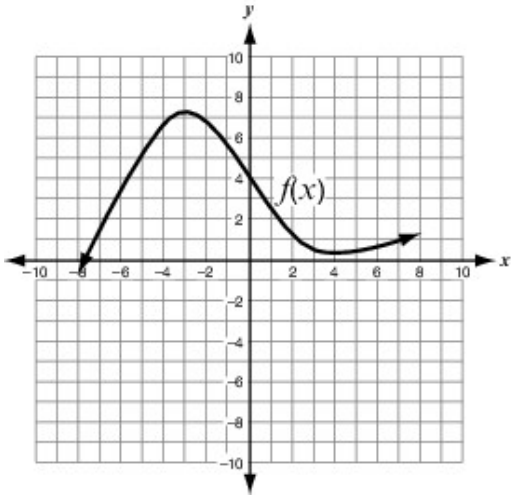
C.


Speed
(in miles per hour)
100
90
80
70
60
50
40
30
20
10
0
0 5 10 15 20 25 30 35 40 45 50
Time
(in seconds)

D.


Speed
(in miles per hour)
100
90
80
70
60
50
40
30
20
10
0
0 5 10 15 20 25 30 35 40 45 50
Time
(in seconds)

69. On which interval is the function $f(x)$ decreasing?



A. from $x = -10$ to $x = 10$

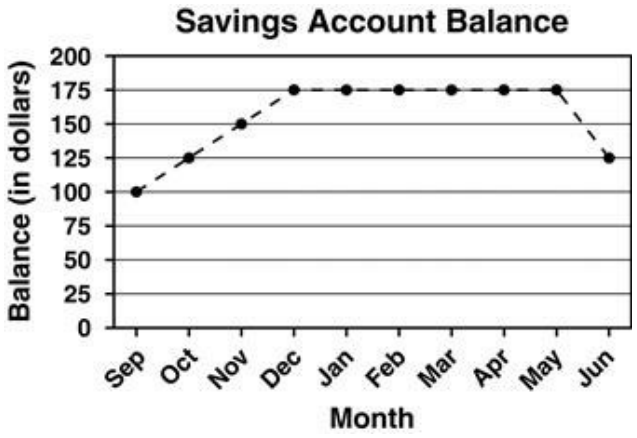
B. from $x = -8$ to $x = -3$

C. from $x = -3$ to $x = 10$

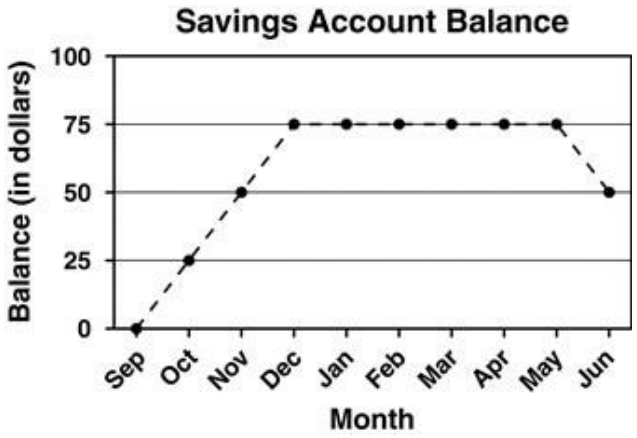
D. from $x = -3$ to $x = 4$

70. **Nick opened a savings account in September with $100 and then added $25 each month from October through December. He made no deposits for the next 5 months. In June, he withdrew money leaving a balance of $50. Which graph best represents the amount of money in Nick's account during this time?**

A.



B.


Savings Account Balance
Balance (in dollars)
100
75
50
25
0
Sep
Oct
Nov
Dec
Jan
Feb
Mar
Apr
May
Jun
Month

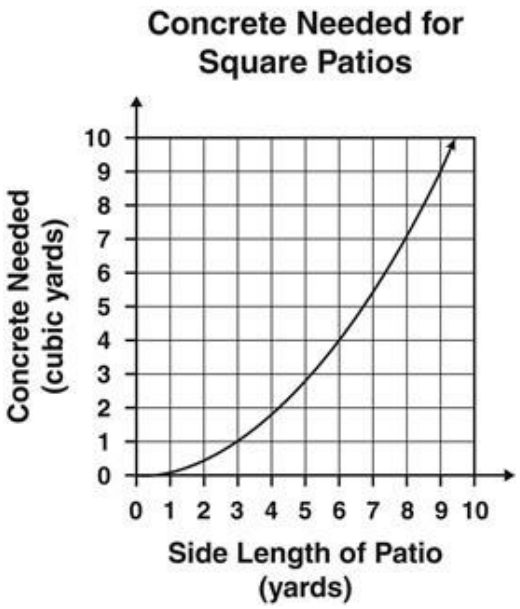
C.


Savings Account Balance
Balance (in dollars)
125
100
75
50
25
0
Sep
Oct
Nov
Dec
Jan
Feb
Mar
Apr
May
Jun
Month

D.


Savings Account Balance
Balance (in dollars)
200
175
150
125
100
75
50
25
0
Sep
Oct
Nov
Dec
Jan
Feb
Mar
Apr
May
Jun
Month

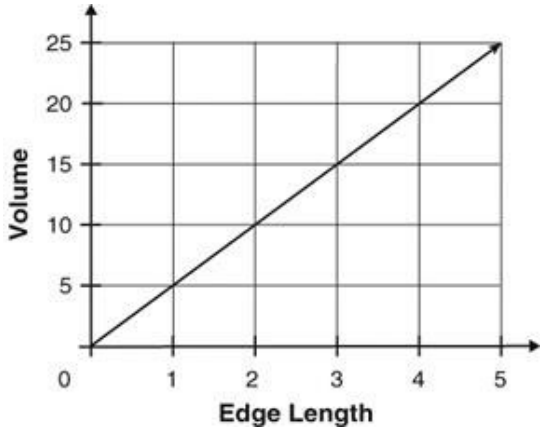
71. **The graph below shows the amount of concrete needed to build 4-inch thick square patios of various side lengths.**



About how much more concrete is needed for a patio with a side length of 8 yards than for a patio with a side length of 3 yards?

A. 2.8 cubic yards
B. 3.3 cubic yards
C. 6.1 cubic yards
D. 7.1 cubic yards

72. **This graph shows the volume of a rectangular prism given the length of one of its edges.**

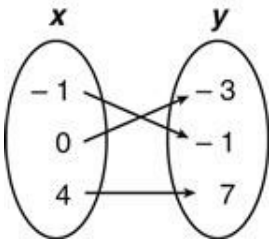


What is the edge length for a rectangular prism with a volume of 32 cubic units?

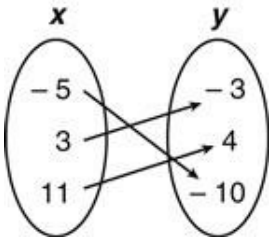
A. 5.4 units
B. 6.0 units
C. 6.4 units
D. 7.0 units

73. **Which relation best represents a linear function?**

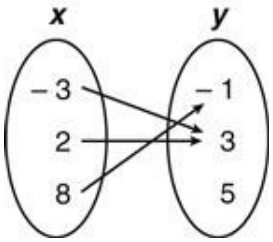
A.



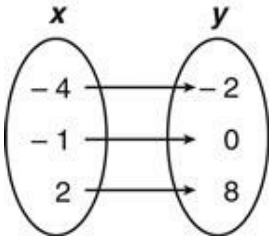
B.



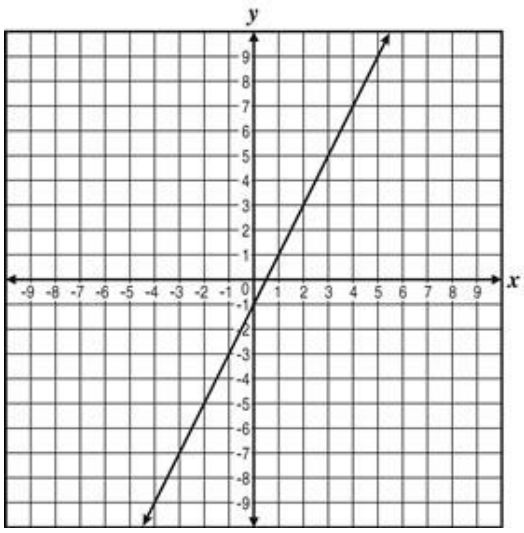
C.



D.



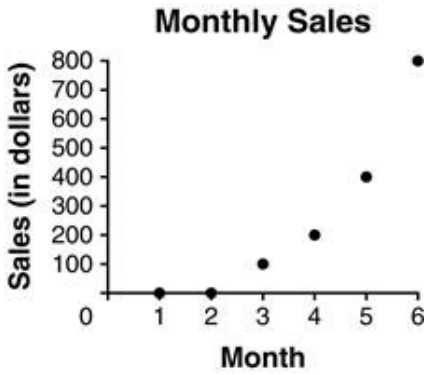
74. **The graph below represents the equation** $y = 2x - 1$.



Which statement accurately predicts the effects on the graph if the slope of the line is changed to 3?

A. The graph is closer to being a vertical line but still slants to the right.
B. The graph is closer to being a horizontal line but still slants to the right.
C. The graph is closer to being a vertical line and changes to slant to the left.
D. The graph is closer to being a horizontal line and changes to slant to the left.

75. **Yvonne began making beaded jewelry at home. After 2 months of advertising, customers began to buy her jewelry. The graph shows the number of sales she made in the first 6 months.**

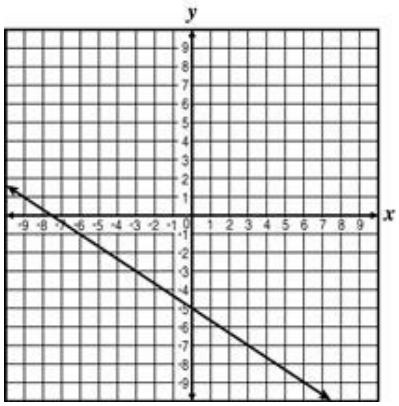


Based on this graph, which statement is true?

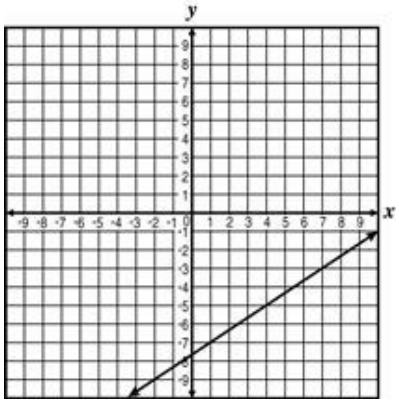
A. Yvonne's sales increased $100 every month.
B. Yvonne's sales increased $200 every month.
C. The rate of Yvonne's sales was constant every month.
D. The rate of Yvonne's sales was increasing every month.

76. **Which graph best represents a line with a slope of $-\frac{2}{3}$ that passes through $(7, -3)$?**

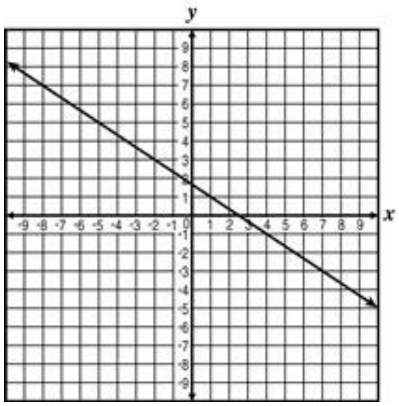
A.



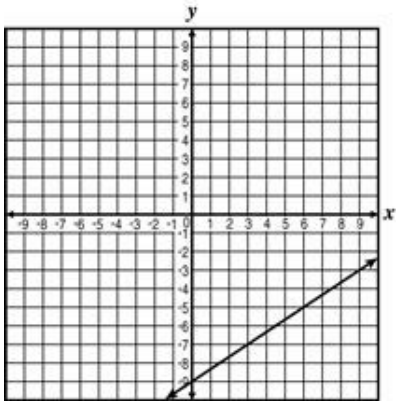
B.



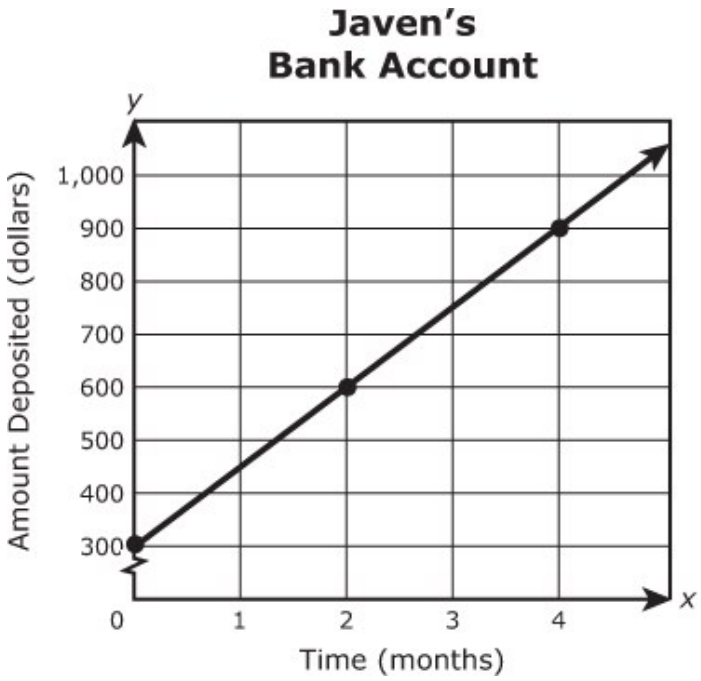
C.



D.



77. Study the graph about Javen's bank account.



Which interpretation **best** describes the activity in Javen's bank account?

A. Javen had $150 in his account when he began depositing $300 on a monthly basis.

B. Javen had $300 in his account when he began depositing $150 on a monthly basis.

C. Javen withdrew $150 from his account before he began depositing $300 on a monthly basis.

D. Javen withdrew $300 from his account before he began depositing $150 on a monthly basis.

78. **Which does not represent a linear function?**

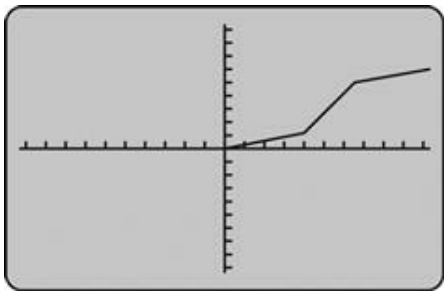
A. $x = 2y - 3$

B. $y + 1 = x$

C. $xy = 2$

D. $x + 1 = \frac{3}{4}y$

79. **The graphing calculator screen represents the distance traveled by a moving object as a function of time.**

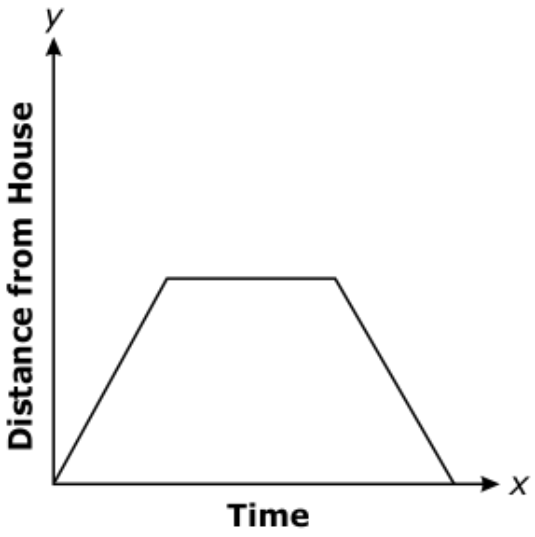


Which statement correctly describes how the object's speed changes?

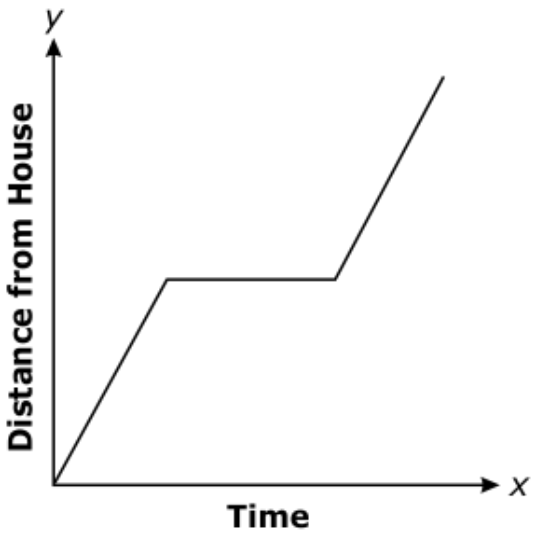
A. The object speeds up twice.
B. The object slows down twice.
C. The object speeds up and then slows down.
D. The object slows down and then speeds up.

80. Emily went to the beach for the day. Leaving her house, Emily drove to the beach, stayed there for a few hours, then drove home. Which graph ***best*** represents this scenario?

A.

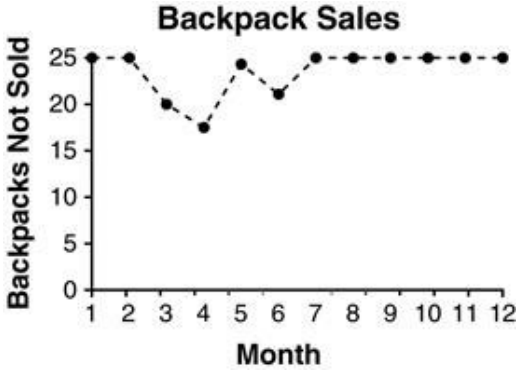


B.



C.

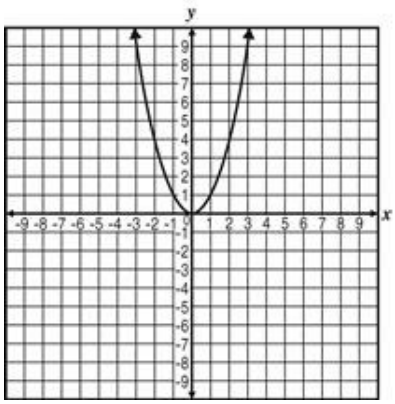
81. **At the beginning of each month, Patrick restocked his store to make sure he had a total of 25 backpacks available for sale. The graph below shows the number of backpacks he had not sold each month.**



Which statement best describes the horizontal segment of the graph in Months 7 through 12?

A. The rate of sales was 25 backpacks per month.
B. The rate of backpacks not sold was 25 per month.
C. There was an increase of 5 backpacks sold per month.
D. There was an increase of 5 backpacks not sold per month.

82. **Which symbolic rule represents the graph of the function shown?**



A. $y = x$

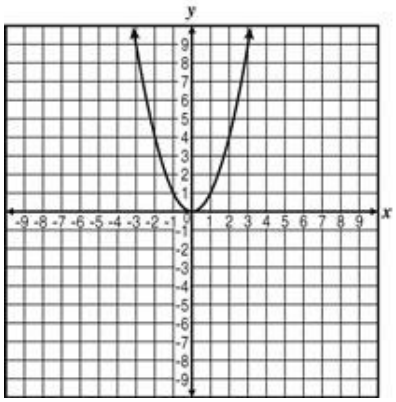
B. $y = |x|$

C. $y = x^2$

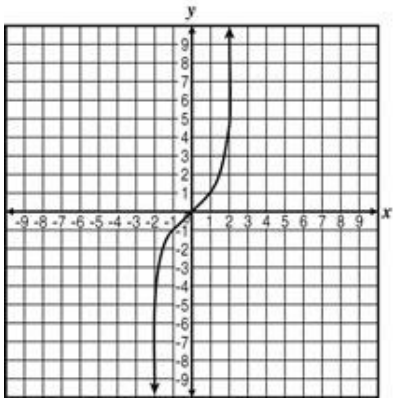
D. $y = x^3$

83. **Which of the following graphs represents a linear function?**

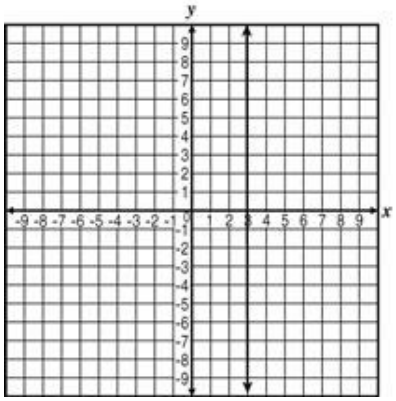
A.



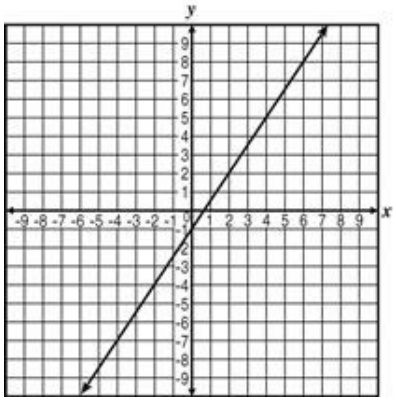
B.



C.

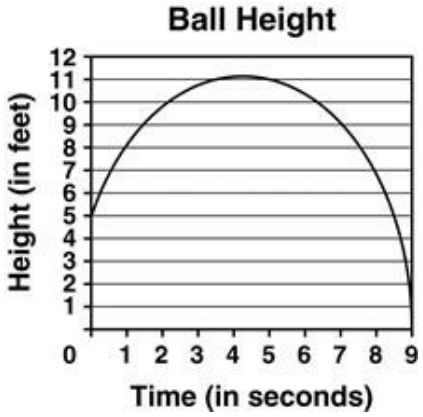


D.

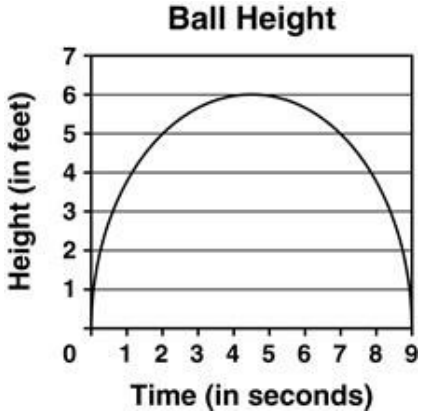


84. **A ball is thrown up in the air from 5 feet above the ground level. The ball reached a height of an additional 6 feet in 5 seconds, and then came down back to ground level in 4 more seconds. Which graph best represents the relationship between the height of the ball and the time?**

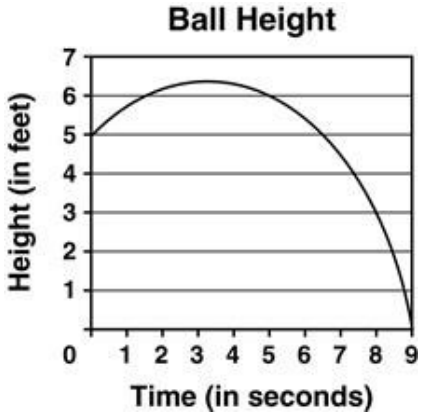
A.



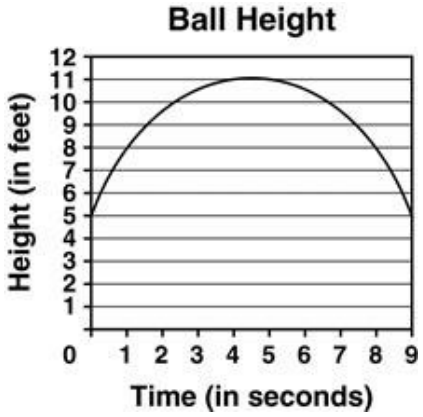
B.



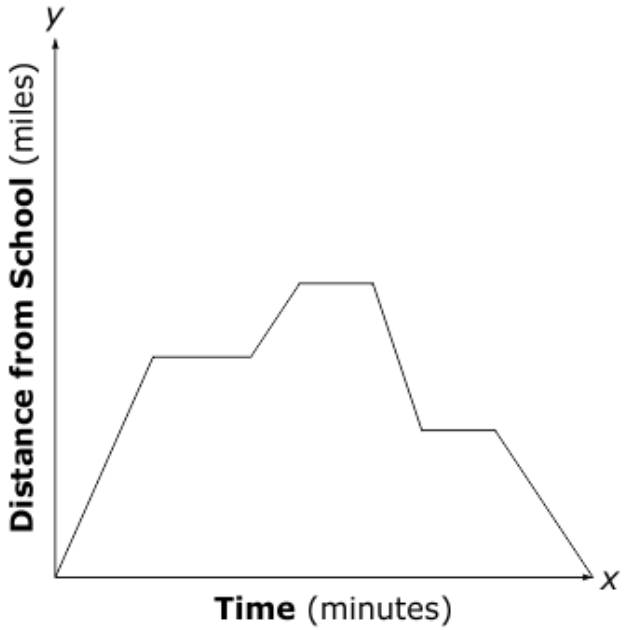
C.



D.



85. The graph below shows the distance a school bus is from school.



Which ***best*** describes what the bus is doing in the flat parts of the graph?

A. speeding up

B. slowing down

C. sitting still

D. returning to school

86. **Which table represents a linear function?**

A.

x	*y*
–2	7
–1	4
0	1
1	2
2	5

B.

x	*y*
–2	–2
–1	–5
0	1
1	4
2	7

C.

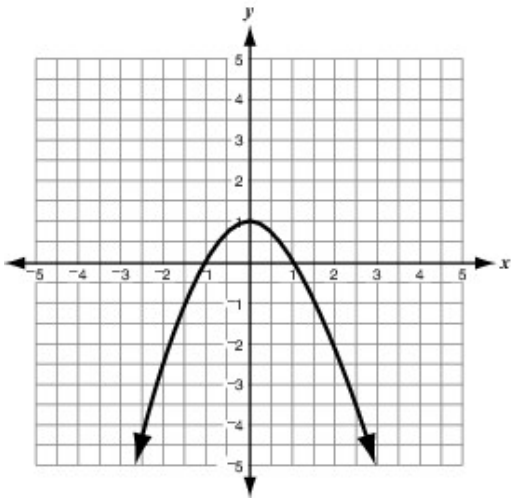
x	*y*
–2	–2
–1	–5
0	7
1	4
2	1

D.

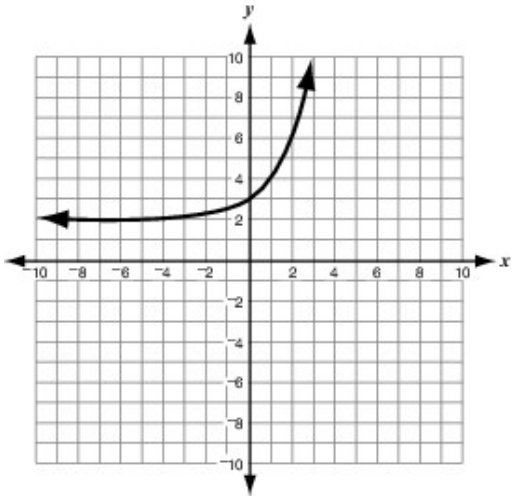
x	*y*
–2	7
–1	4
0	1
1	–2
2	–5

87. Which graph represents a decreasing linear function?

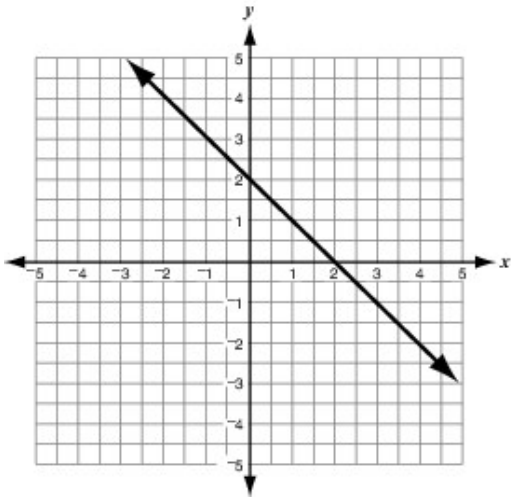
A.



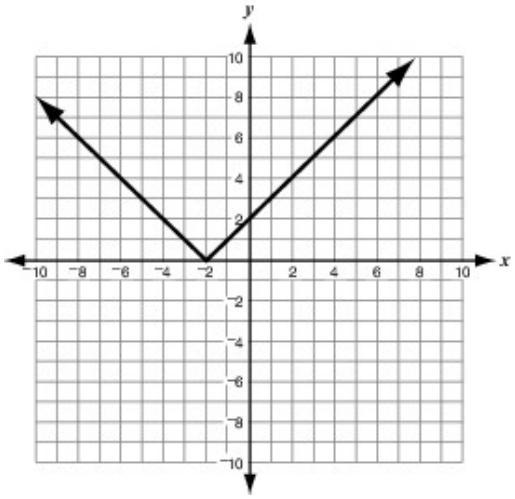
B.


y
x
10
8
6
4
2
−10
−8
−6
−4
−2
2
4
6
8
10
−2
−4
−6
−8
−10

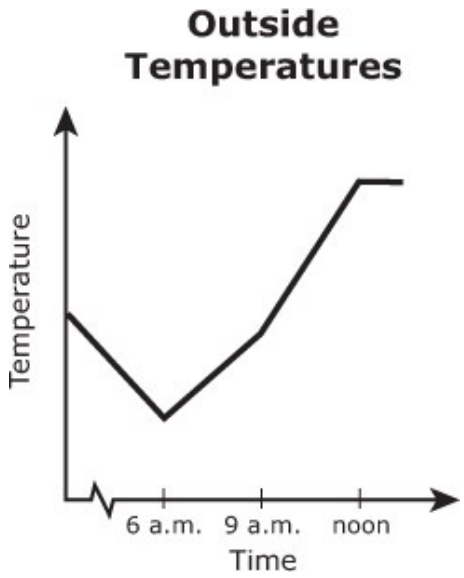
C.


y
x
5
4
3
2
1
−5
−4
−3
−2
−1
1
2
3
4
5
−1
−2
−3
−4
−5

D.


y
x
10
8
6
4
2
−10
−8
−6
−4
−2
2
4
6
8
10
−2
−4
−6
−8
−10

88. The graph shows outside temperatures in a city within the same day.



Which statement about the graph is true?

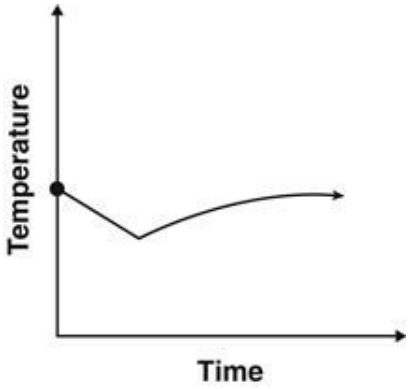
A. The temperature decreased until noon time.

B. The temperature decreased at a constant rate between 6 a.m. and 9 a.m.

C. The temperature increased the most between 9 a.m. and noon time.

D. The temperature increased until 6 a.m. and then decreased until noon time.

89. **Which situation is best illustrated in the graph?**



A. Timmy puts his drink in the refrigerator, removes it, and places it in the freezer.

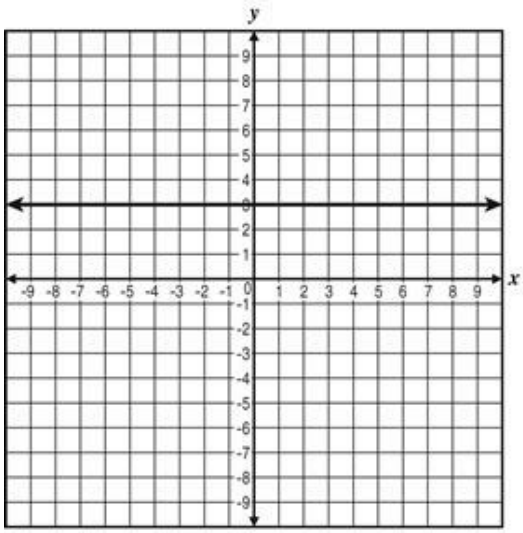
B. Tonya puts her drink in the microwave, heats it, and then drinks it very slowly.

C. Lindsey sets her drink on the table and it warms to room temperature.

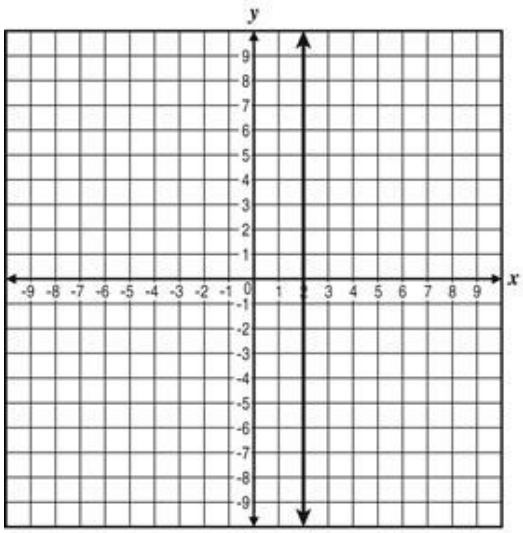
D. Michael puts ice in his drink and then drinks it very slowly.

90. **Which graph best represents a nonlinear function?**

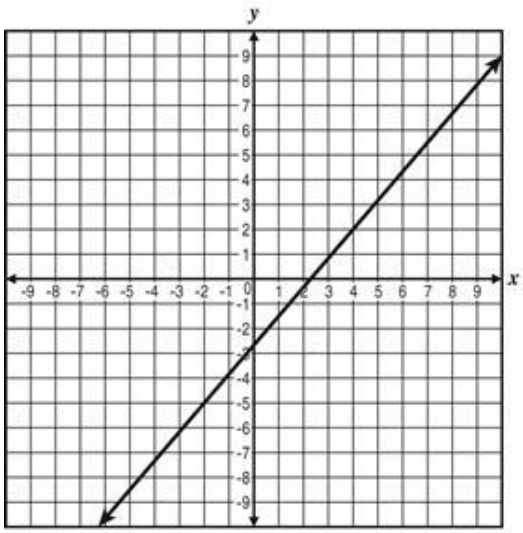
A.



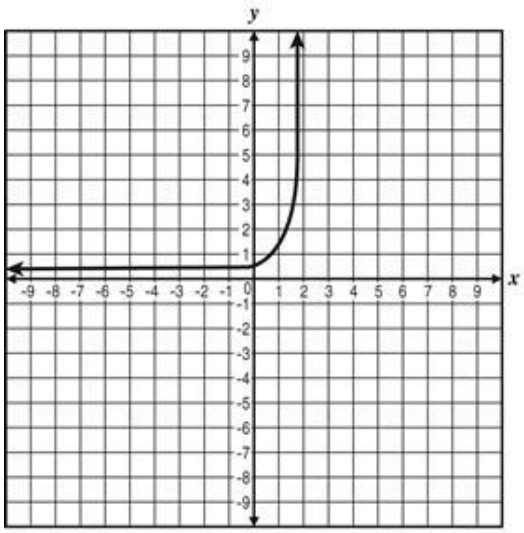
B.



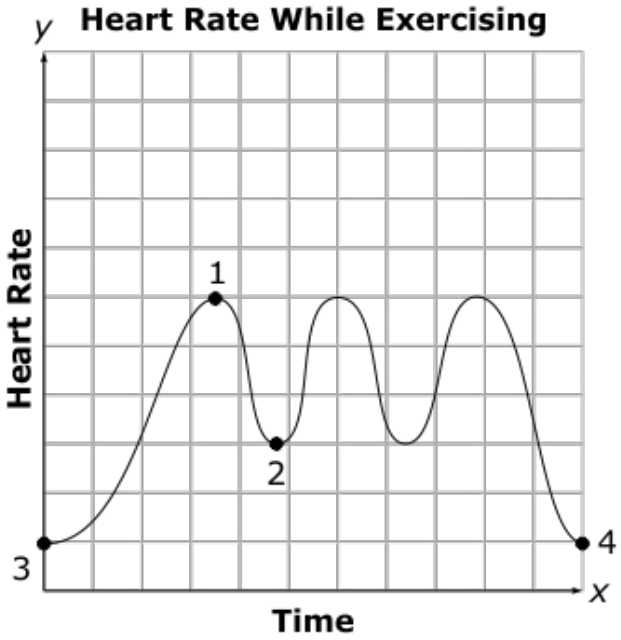
C.



D.



91. Hector finished his exercise routine. The graph below shows Hector's heart rate during the varying intensities of his routine over time.



Which statement is true?

A. Point 1 was the only time Hector reached his maximum heart rate.

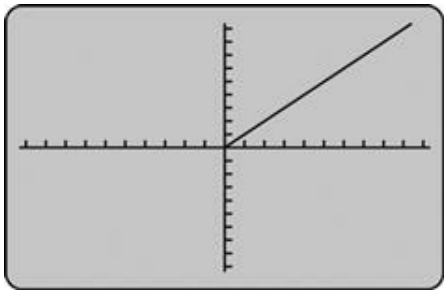
B. The heart rate measured at point 2 occurred four times.

C. At point 3, Hector was in the middle of his routine.

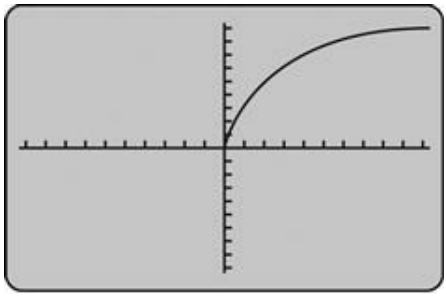
D. At point 4, Hector was warming up for his routine.

92. **A graphing calculator screen represents time on the horizontal axis and the distance traveled by an object on the vertical axis. Which screen represents an object that is continuously speeding up?**

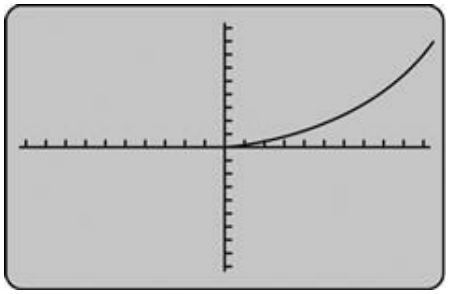
A.



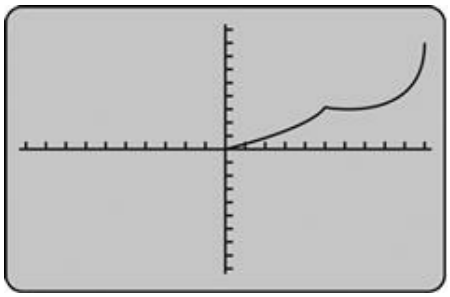
B.



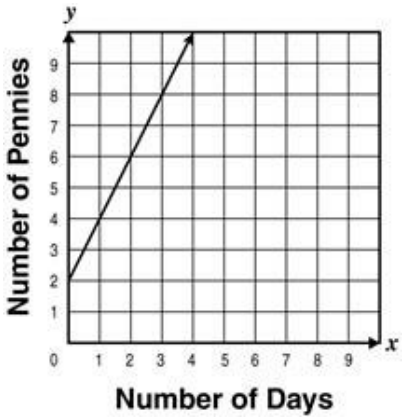
C.



D.

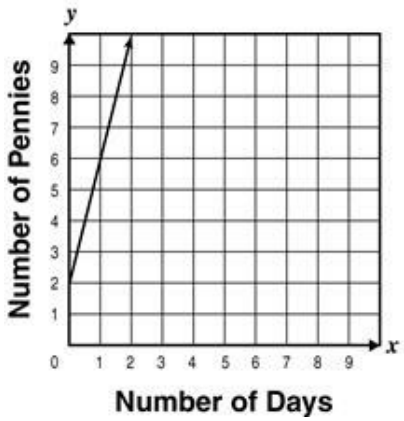


93. **Samuel received a jar with 2 pennies in it today, and he will add 2 more pennies to it each day. The relationship between *x*, the number of days that pass, and *y*, the total number of pennies in the jar, is graphed below.**

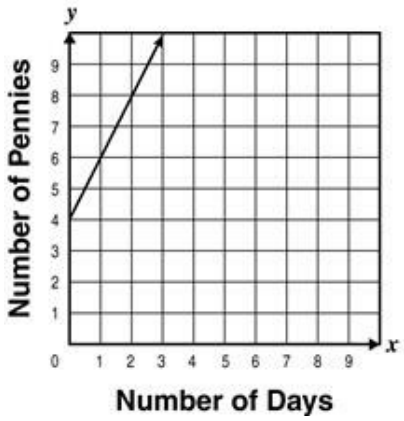


Lisa also has a jar containing 2 pennies. She will add 4 rather than 2 pennies to it each day. Which graph shows the *x* and *y* relationship described above with respect to Lisa's jar?

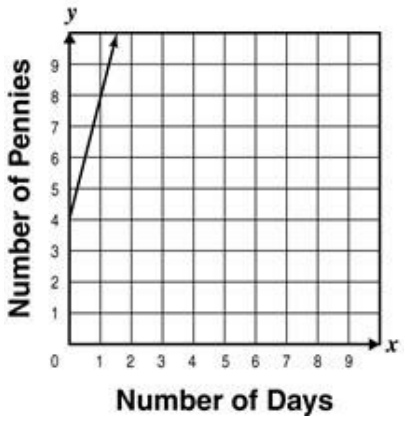
A.



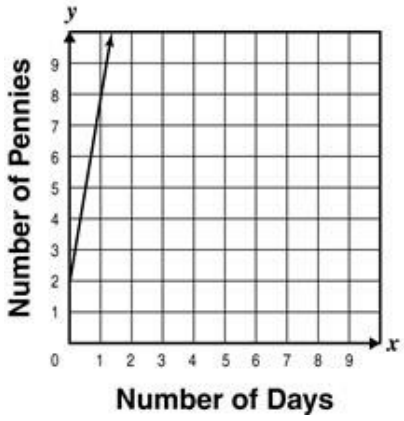
B.



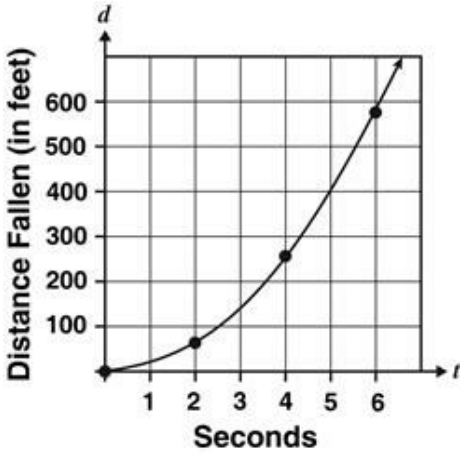
C.



D.



94. **The function $d = 16t^2$ gives the distance, *d*, that a rock will fall in *t* seconds. This function is modeled in this graph.**

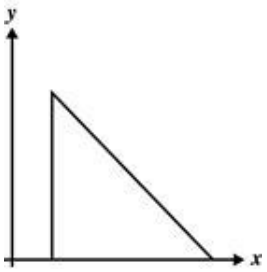


Using this formula and the graph, how far will the rock fall in 3 seconds?

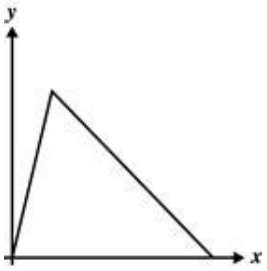
A. 50 feet
B. 96 feet
C. 144 feet
D. 256 feet

95. **An elevator ascended from the ground floor to the 10th floor of a building in 24 seconds at a constant rate. The elevator doors opened and closed. It then descended to the ground floor at the same rate. Which graph best represents the distance the elevator traveled in 1 minute?**

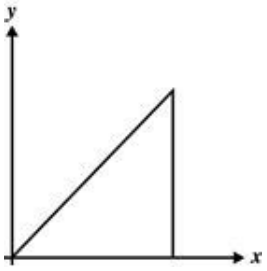
A.



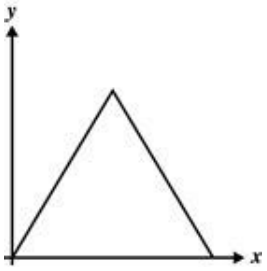
B.



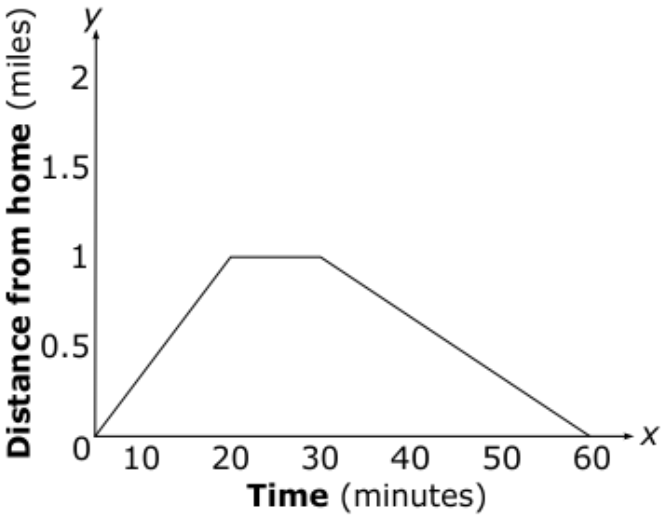
C.



D.



96. Sydney graphed her distance from home compared to the amount of time she walked.



Which ***best*** describes her walk between minute 30 and minute 60?

A. Sydney is walking toward her home at a faster rate than the rate at which she walked away from home.

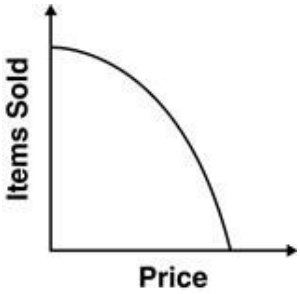
B. Sydney is walking toward her home at a slower rate than the rate at which she walked away from home.

C. Sydney is walking away from her home at a slower rate than the rate at which she walked toward her home.

97. **A store manager knows that as the price of a particular item increases, the number of items sold will decrease. Which graph best represents this relationship?**

A.

B.

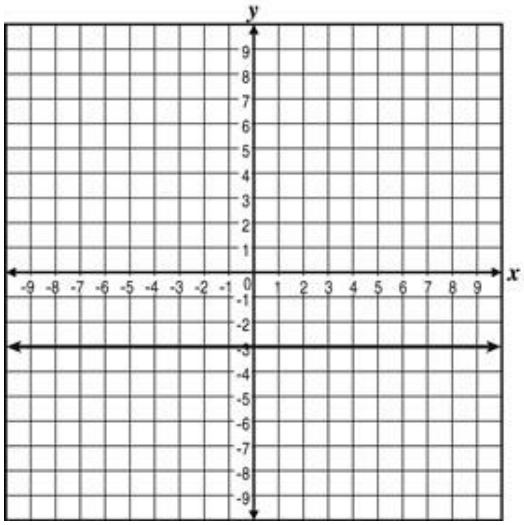


C.

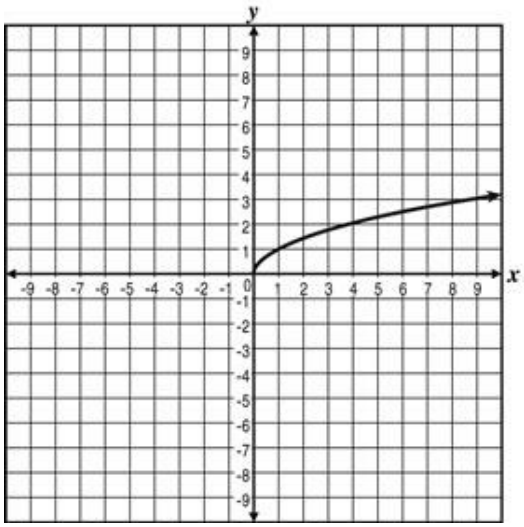
D.

98. **Which graph best represents a nonlinear function?**

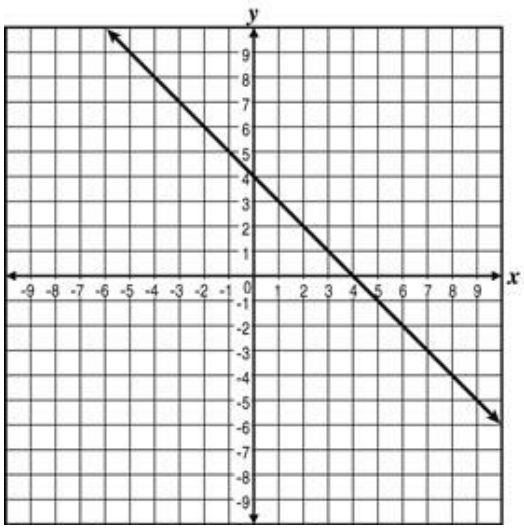
A.



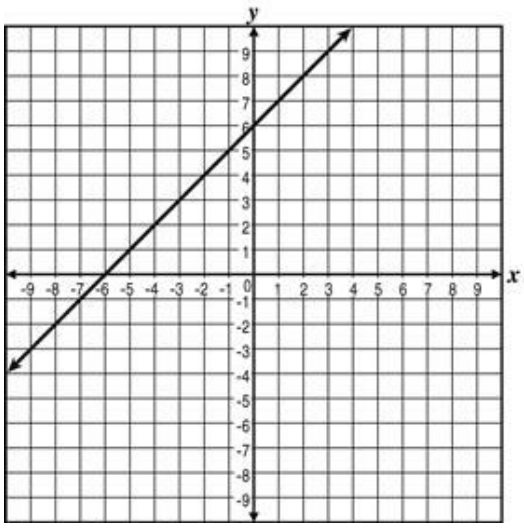
B.



C.

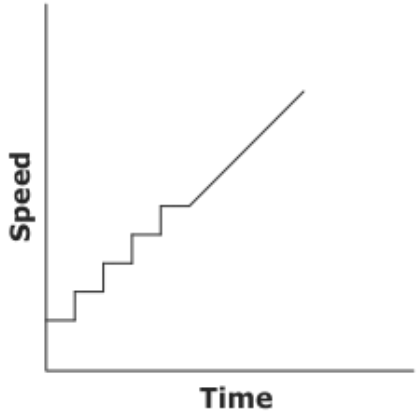


D.

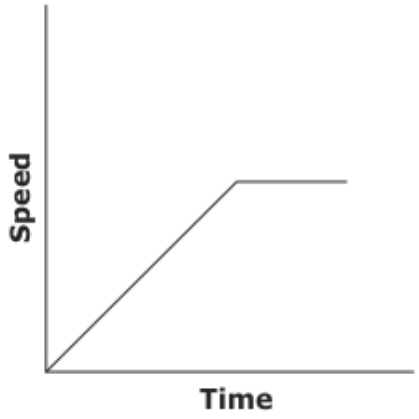


99. Jenny is walking upstairs at a steady pace when the school bell rings. At the top of the stairs, she then runs to her classroom. Which graph ***best*** models the scenario?

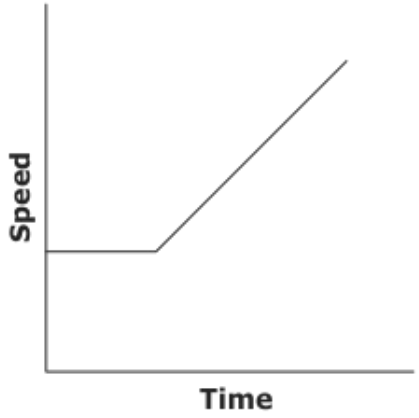
A.



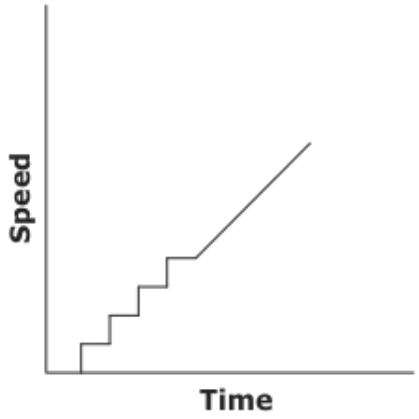
B.



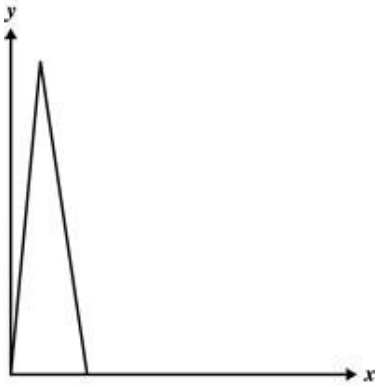
C.



D.

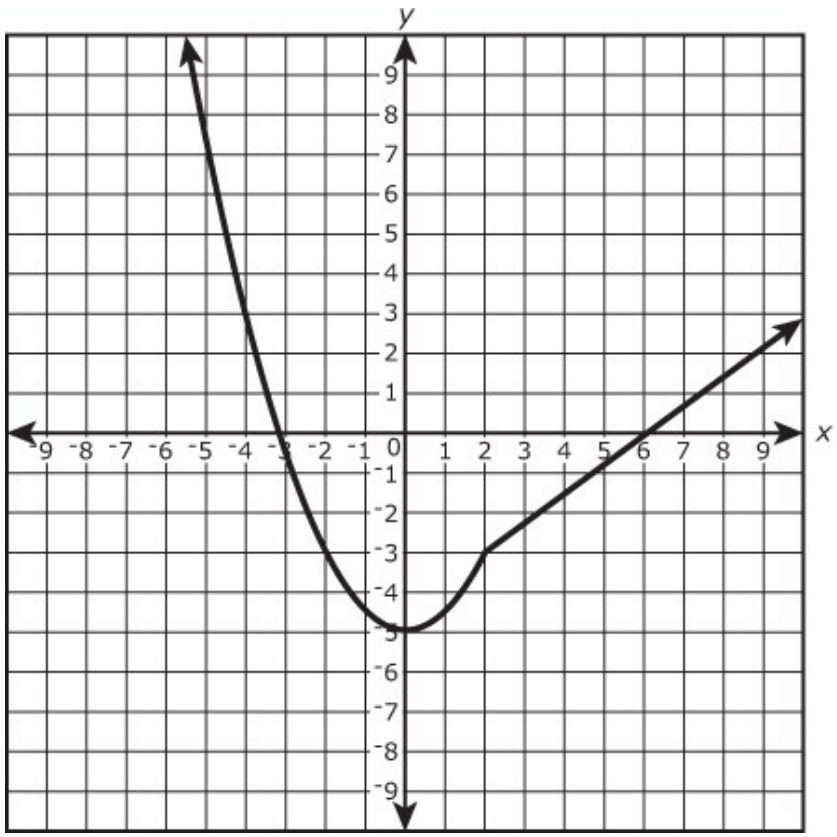


100. **Which situation could be described by the graph below?**



A. A runner sprints, jogs, sprints, jogs back to the starting point, and stops.
B. The sales of games increases all day on Saturday and no sales are made on Sunday.
C. A dirt-bike rider's speed slowly decreases going up a hill and greatly increases on the way down.
D. In a short dash a runner quickly increased his speed, reached a maximum, and just as quickly decreased his speed.

101. A function is graphed on the coordinate plane.



For which values of *x* is the function linear?

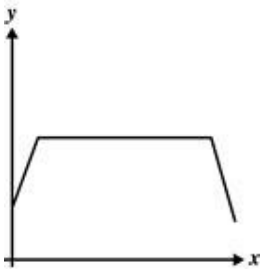
A. $x < 2$

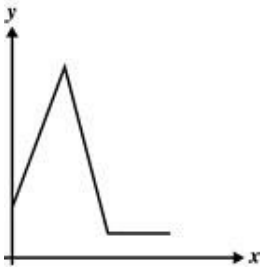
B. $x < -3$

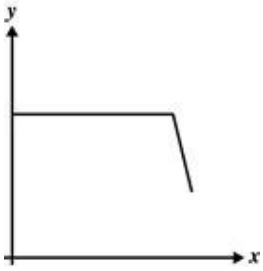
C. $x > 2$

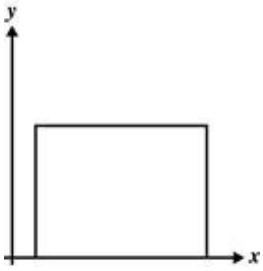
D. $x > -3$

102. **When Maxine drove to work, she increased her speed as she entered the highway. She then drove at a constant speed for 30 minutes before slowing down and exiting the highway. Which graph best represents the changes in speed over time during Maxine's drive to work?**

A. 

B. 

C. 

D. 

103. **What value should replace the question mark in the table if the table represents a linear function?**

Table

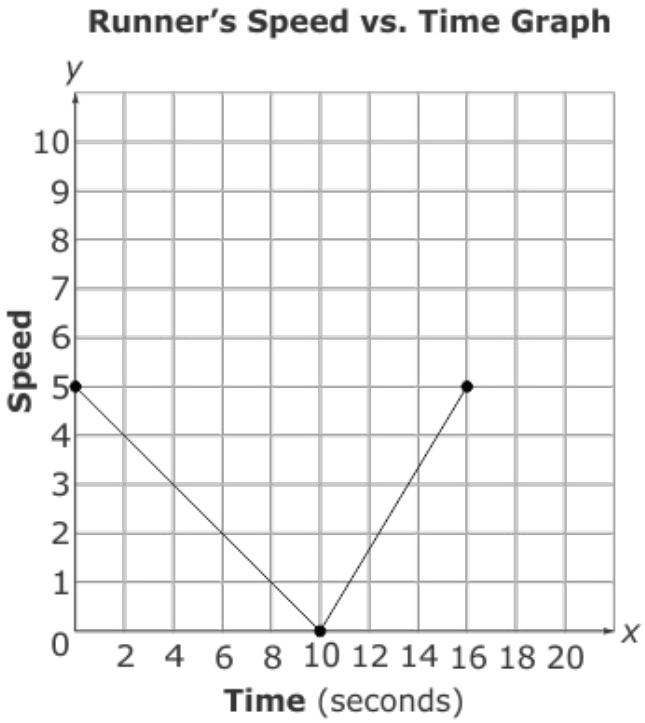
x	*y*
–1	0
0	5
1	10
2	?
4	25

A. 3
B. 5
C. 15
D. 20

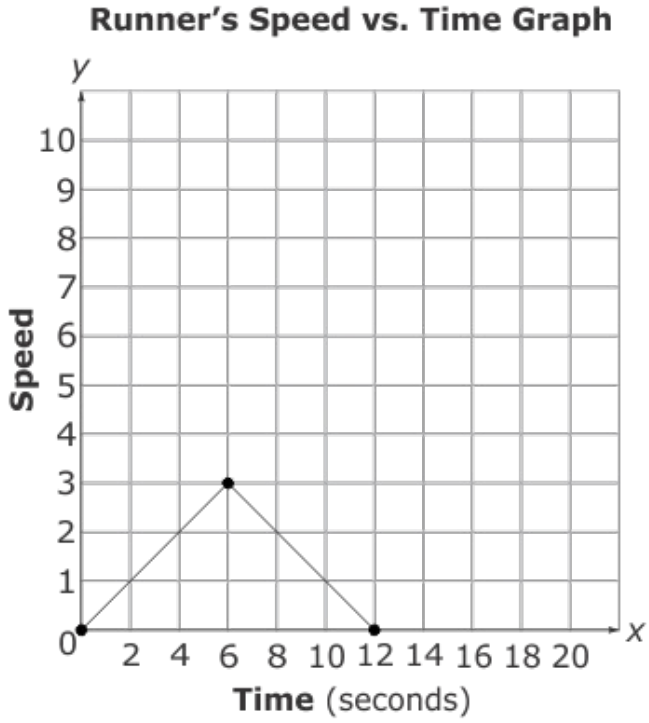
104. Which graph best represents a runner who starts a race quickly, runs at

a steady pace, sprints to the finish line, and slowly comes to a stop after crossing the finish line?

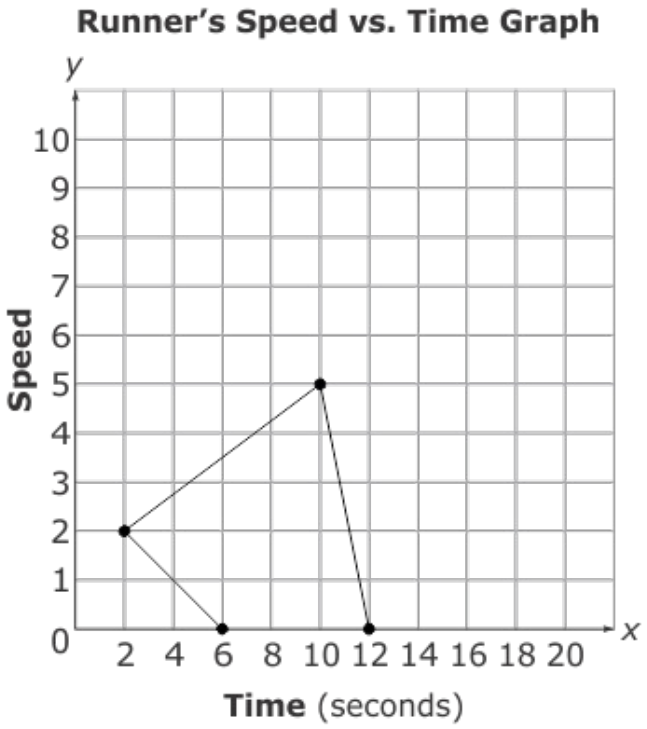
A.



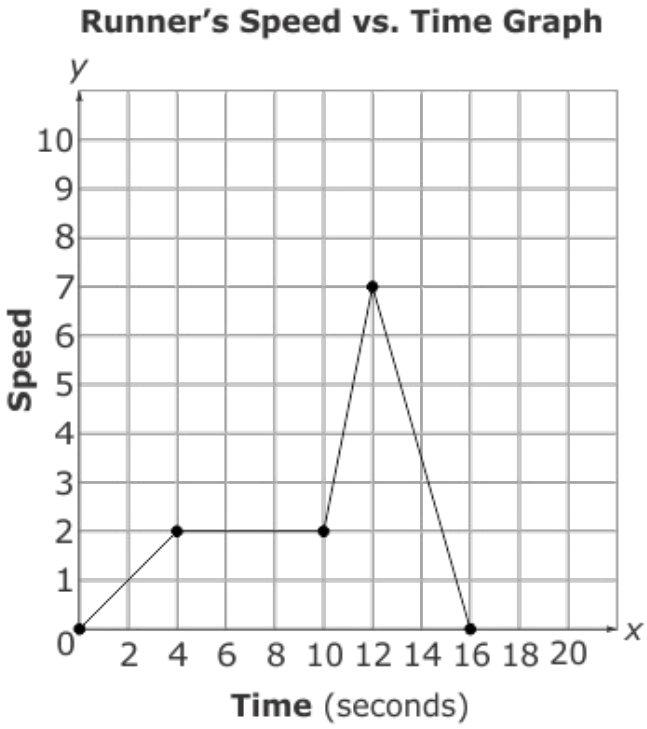
B.



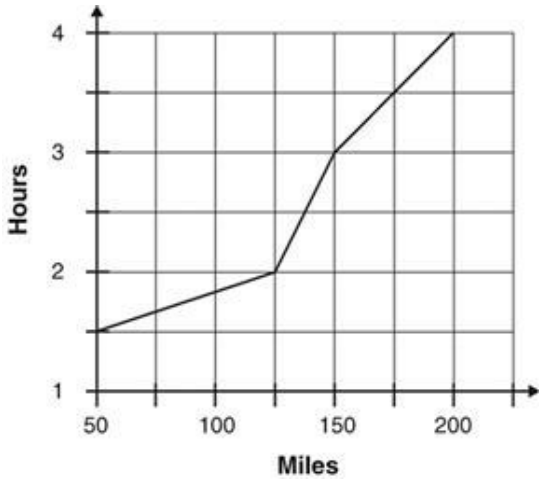
C.


Runner's Speed vs. Time Graph
y
10
9
8
7
6
5
4
3
2
1
0
Speed
2 4 6 8 10 12 14 16 18 20
x
Time (seconds)

D.


Runner's Speed vs. Time Graph
y
10
9
8
7
6
5
4
3
2
1
0
Speed
2 4 6 8 10 12 14 16 18 20
x
Time (seconds)

105. **Kavin collected data on the distances he traveled every hour, as shown on the graph below.**

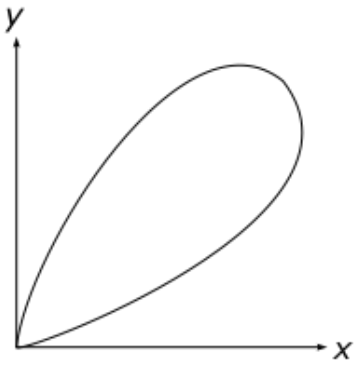


What was Kavin's average speed in miles per hour between 2 and 4 hours?

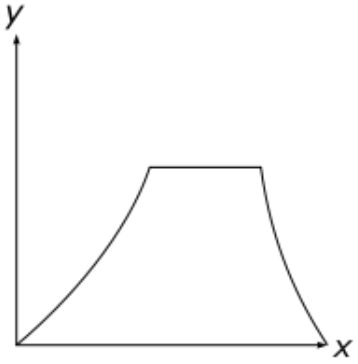
A. 37.5
B. 50.0
C. 60.0
D. 66.7

106. Which graph could represent a person walking around a track at a constant rate?

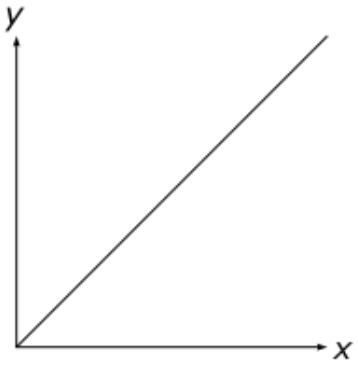
A.



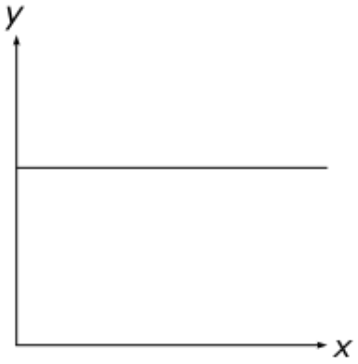
B.



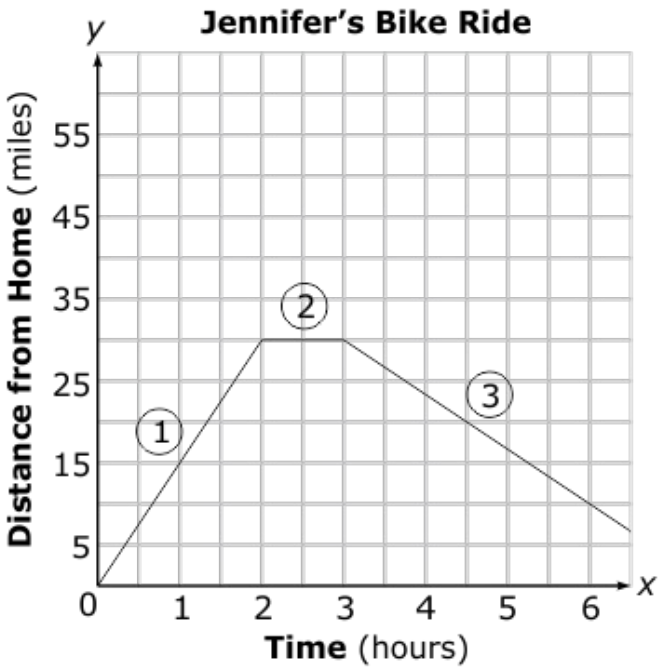
C.



D.



107. Jennifer rode her bike on a trail near her house. The graph below displays the distance from her house as she biked.



Which statement is true?

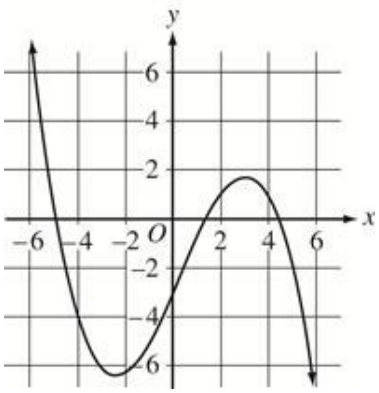
A. Jennifer biked up a steep hill in section 1.

B. Jennifer biked back to her house in section 3.

C. Jennifer biked at a constant rate in section 2.

D. Jennifer biked at the same rate to and from her home.

108. **The graph of $y = f(x)$ is shown below.**

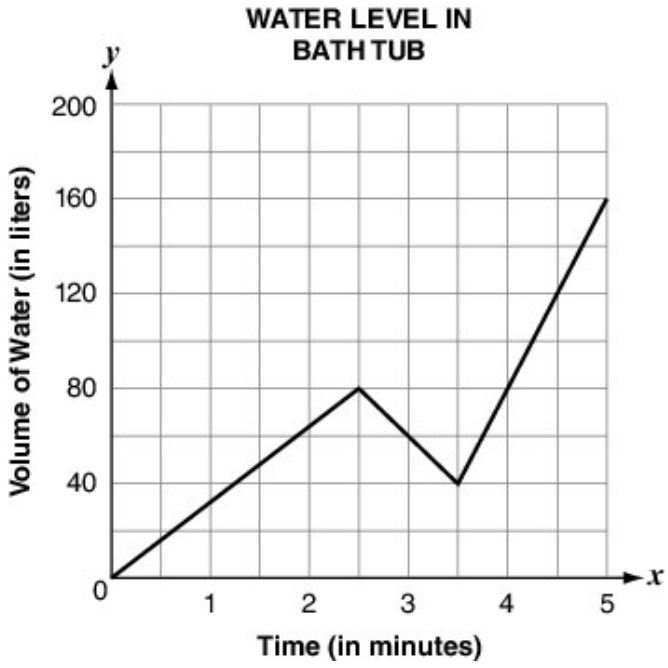


For what value of x does $y = x$?

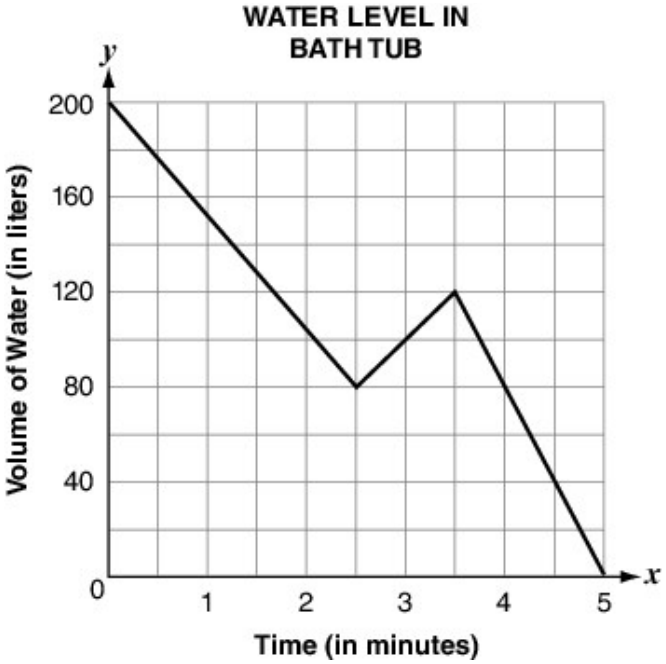
A. -5
B. -4
C. 1.5
D. 3

109. Jenny removes the plug from a bathtub holding about 200 liters of water. The faucet is off, and the water begins draining at a constant rate. After 2.5 minutes, she puts the plug back for about 1 minute. Then, Jenny removes the plug again. The water starts draining again and it takes about 1.5 minutes to empty the tub. Which graph represents the water in the tub over time as Jenny drains it?

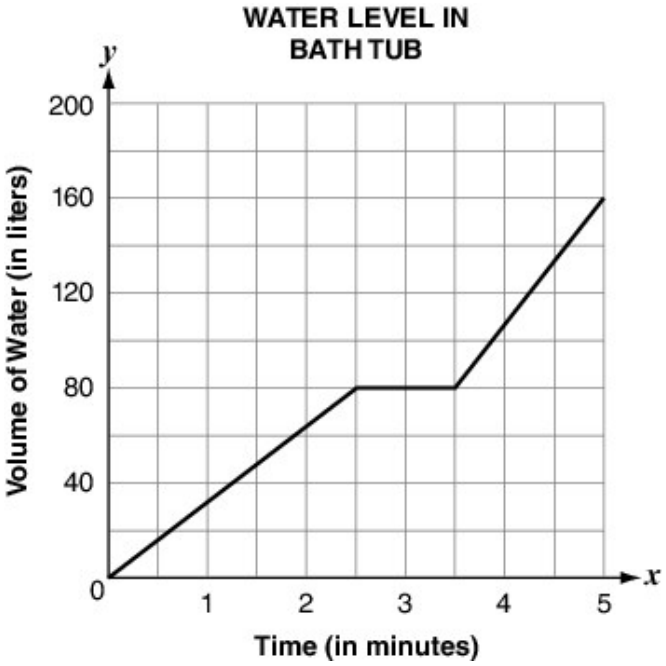
A.



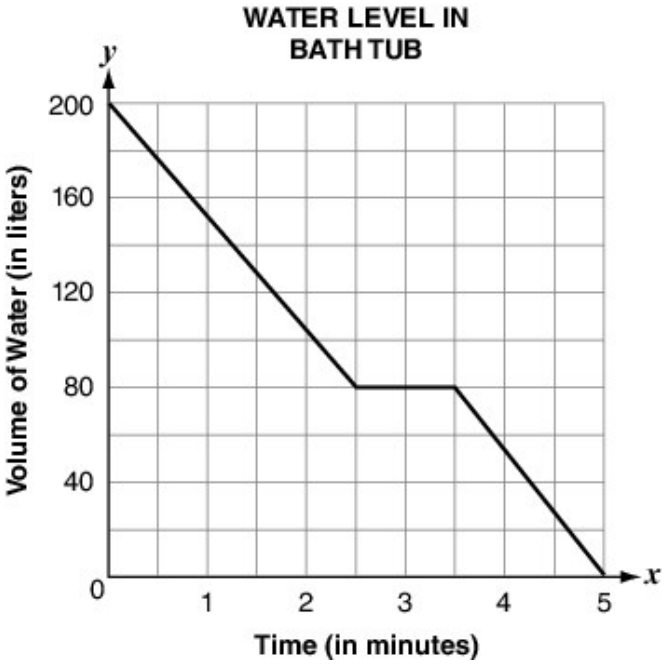
B.


WATER LEVEL IN
BATH TUB
y
200
160
120
80
40
0
Volume of Water (in liters)
1
2
3
4
5
x
Time (in minutes)

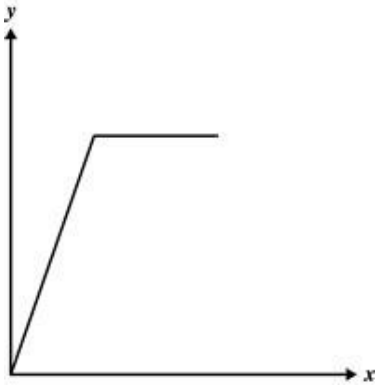
C.


WATER LEVEL IN
BATH TUB
y
200
160
120
80
40
0
Volume of Water (in liters)
1
2
3
4
5
x
Time (in minutes)

D.



110. **Which scenario best fits the linear function graphed below?**



A. the volume of milk in a container decreasing during a meal
B. a car traveling at a constant speed and then moving in reverse
C. a rapid increase in truck sales followed by a steady decline in sales over time
D. a population of birds increasing in numbers and then remaining constant over time

111. **If the coordinates from each table are graphed, which will form a linear pattern?**

A.

x	*y*
–5	8
–2	4
–2	5
0	1

B.

x	*y*
0	–1
3	5
4	7
6	11

C.

x	*y*
–4	3
–1	1
0	2
2	4

D.

x	*y*
1	8
2	5
3	4
4	2

112. **Which table of values best represents a linear function?**

A.

x	*y*
–3	9
–1	1
0	0
4	16
6	36

B.

x	*y*
–5	4
–1	8
0	6
2	2
5	9

C.

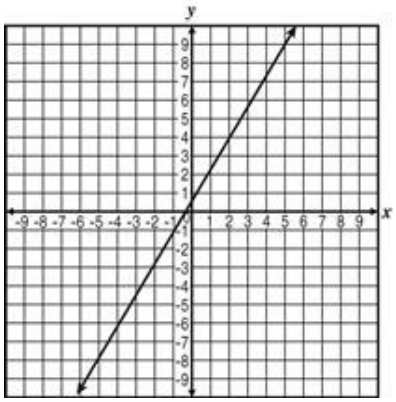
x	*y*
–4	1
–2	–1
0	–3
2	–5
5	–8

D.

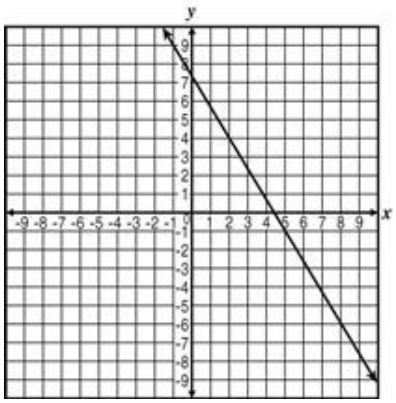
x	*y*
–2	–8
–1	–1
0	0
3	27
4	64

113. **Which of the lines graphed below has a slope of $\frac{3}{5}$ and passes through $(2, 4)$?**

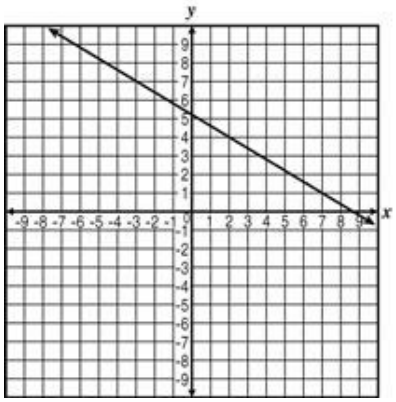
A.



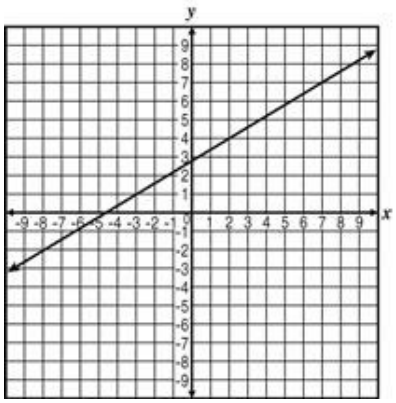
B.



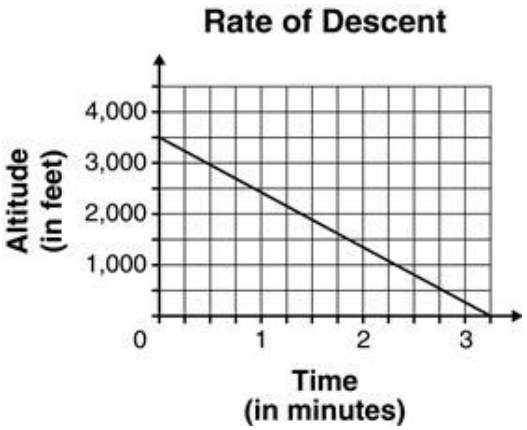
C.



D.



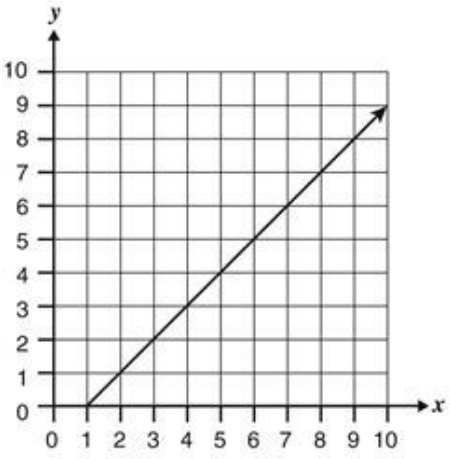
114. **The graph shows the rate of descent of a parachutist after his parachute opened at an altitude of 3,500 feet.**



Based on the graph, which best represents the altitude of the parachutist 2.5 minutes after his parachute opened?

A. 260 feet
B. 800 feet
C. 1,000 feet
D. 1,340 feet

115. **Which statement best describes the relationship between *x* and *y* in the graph below?**

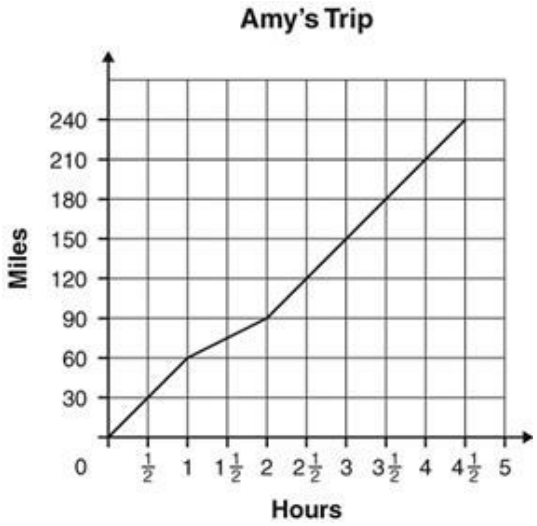


A. *y* is twice *x*
B. *y* is one-half of *x*
C. *y* is one less than *x*
D. *y* is one more than *x*

116. **In the patterns below, *x* is the term number of each *y*-value. Which numerical pattern makes a linear relationship between *x* and *y*?**

A. $y = -16, -13, -10, -7, \ldots$
B. $y = \frac{1}{4}, \frac{1}{2}, 1, 2, 4, \ldots$
C. $y = 5, 2, 1, 2, \ldots$
D. $y = 7, 1, -1, 1, \ldots$

117. **The graph shows the distance Amy traveled over time.**



According to this graph, which statement describes Amy's trip between 2 hours and 3 hours?

A. Amy was traveling at a rate of 30 miles per hour.
B. Amy was traveling at a rate of 40 miles per hour.
C. Amy was traveling at a rate of 50 miles per hour.
D. Amy was traveling at a rate of 60 miles per hour.

118. **If $x = 1, 2, 3, 4, \ldots$ which pattern of y-values completes a linear function?**

A. $y = 0, 1, 8, 27, \ldots$
B. $y = 1, 2, 4, 7, \ldots$
C. $y = 1, 3, 9, 27, \ldots$
D. $y = 2, 5, 8, 11, \ldots$

119. **Which table does not represent a linear function?**

A.

x	*y*
–2	–5
–1	–2
0	1
1	4
2	7

B.

x	*y*
–2	–2
–1	–5
0	1
1	4
2	7

C.

x	*y*
–2	–2
–1	–5
0	–8
1	–11
2	–14

D.

x	*y*
–2	7
–1	4
0	1
1	–2
2	–5

120. **Which of these equations could be described as linear?**

A. $y = \frac{1}{2}x^3 + 8$

B. $2x + 5y = 3^2$

C. $y = x^2 + 4x + 4$

D. $x^2 + y^2 = 25$

121. **Which represents a linear function?**

A. $y = x^2 - 3$

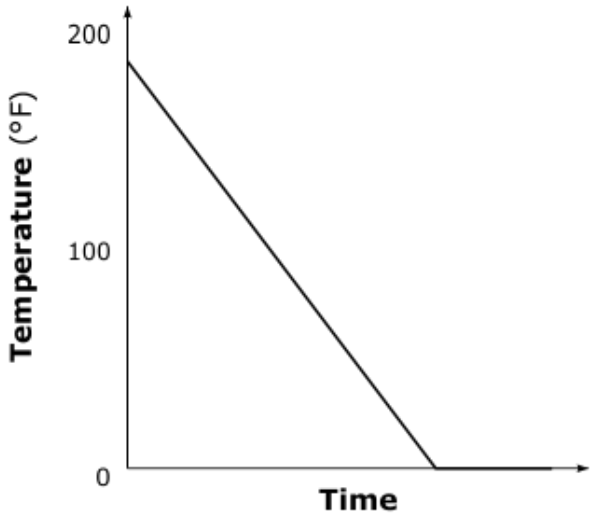
B. $y = 4x^3$

C. $y = \frac{3}{4}x - 2$

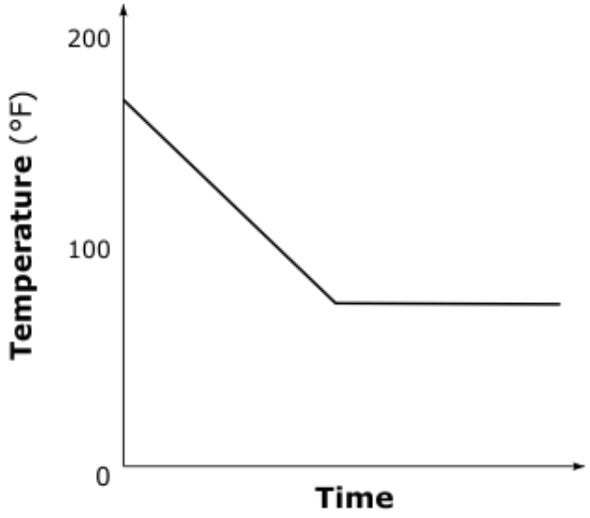
D. $y = 2^x + 1$

122. Susan took a pan of brownies out of the oven and placed them on the kitchen table. Which graph below would ***best*** represent the temperature of the brownies over time?

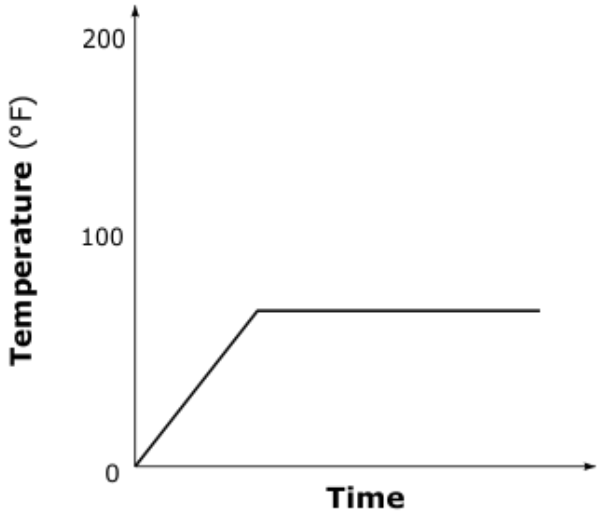
A.


200
100
0
Temperature (°F)
Time

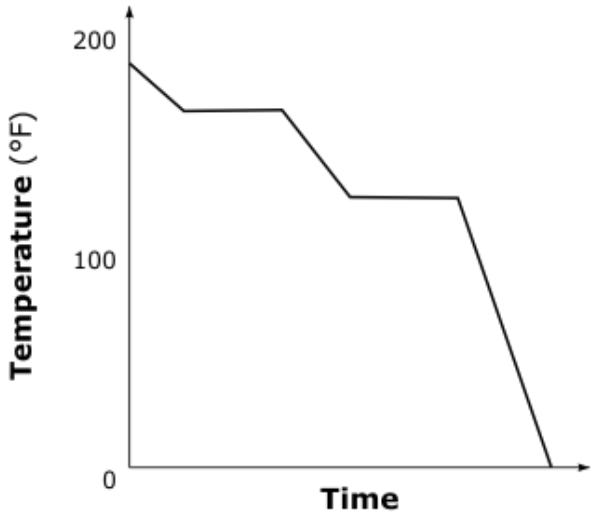
B.


200
100
0
Temperature (°F)
Time

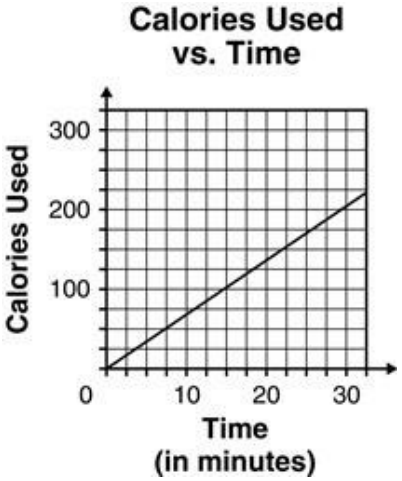
C.


200
100
0
Temperature (°F)
Time

D.



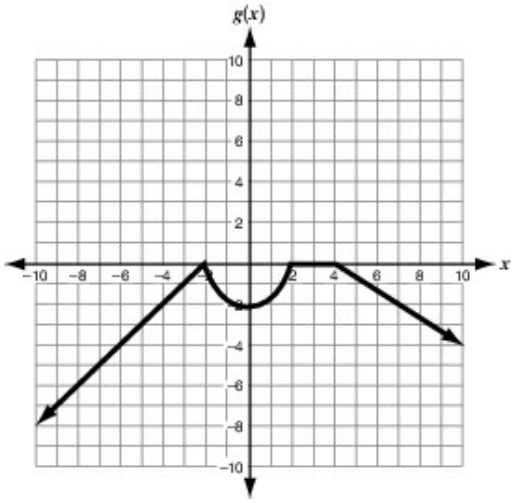
123. **The graph shows the number of calories that Majorie used while jogging.**



Based on the graph, which statement is true?

A. Majorie used exactly 50 calories jogging for 5 minutes.
B. Majorie used exactly 100 calories jogging for 10 minutes.
C. Majorie used less than 175 calories jogging for 30 minutes.
D. Majorie used less than 150 calories jogging for 20 minutes.

124. The graph below represents the function $g(x)$. Which table **best** describes the behavior of the graph?



A.

Interval	Behavior of $g(x)$
$x < -2$	Constant
$-2 < x < 0$	Increasing
$0 < x < 2$	Decreasing
$2 < x < 4$	Increasing
$x > 4$	Decreasing

B.

Interval	Behavior of $g(x)$
$x < -2$	Constant
$-2 < x < 0$	Decreasing
$0 < x < 2$	Increasing
$2 < x < 4$	Increasing
$x > 4$	Decreasing

C.

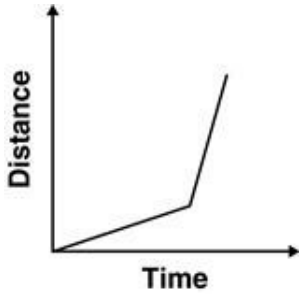
Interval	Behavior of $g(x)$
$x < -2$	Increasing
$-2 < x < 0$	Increasing
$0 < x < 2$	Decreasing
$2 < x < 4$	Constant
$x > 4$	Decreasing

D.

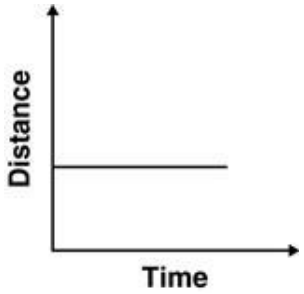
Interval	Behavior of $g(x)$
$x < -2$	Increasing
$-2 < x < 0$	Decreasing
$0 < x < 2$	Increasing
$2 < x < 4$	Constant
$x > 4$	Decreasing

125. **A toy car traveled at a constant speed for 40 seconds, and then increased to a slightly faster constant speed for 10 seconds. Which graph best illustrates the speed of the toy car?**

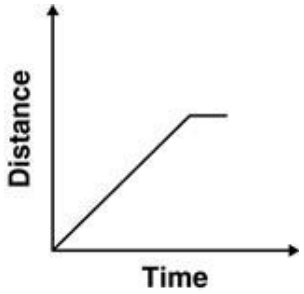
A.



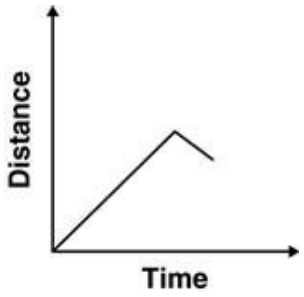
B.



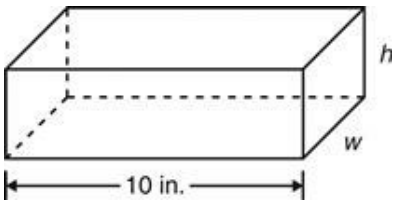
C.



D.

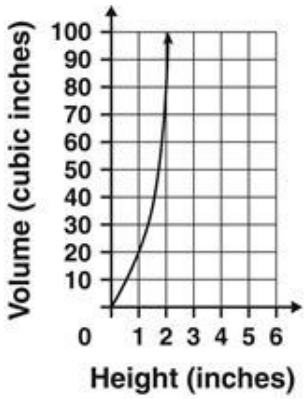


126. **The rectangular prism has a length of 10 inches.**

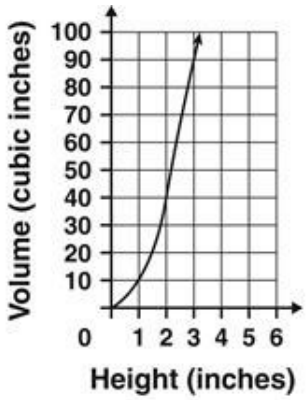


If the width of the prism is twice its height, which graph represents the volume of the prism as the height increases?

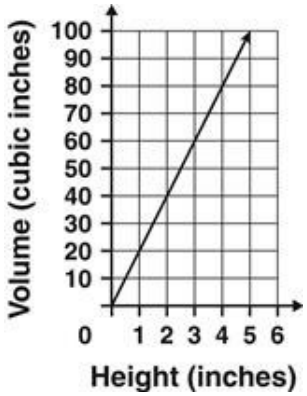
A.



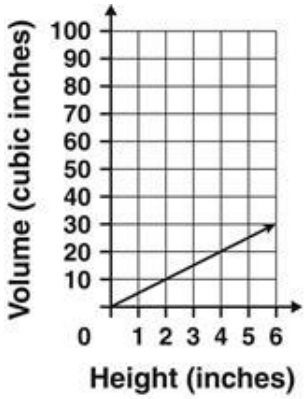
B.



C.



D.

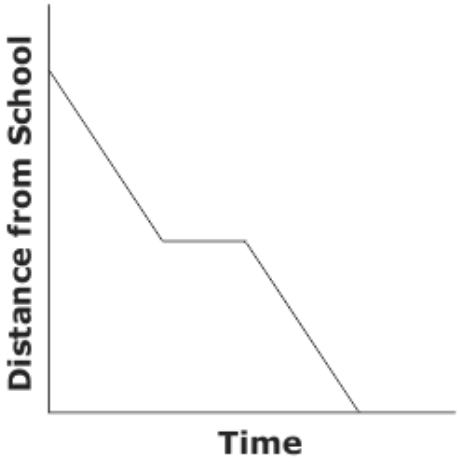


127. **Which correctly describes the behavior of the graph of $y = 5$ in the *xy*-plane?**

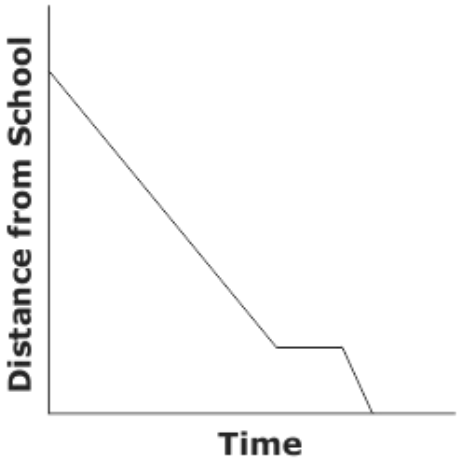
A. The graph is a vertical line.
B. The graph is a horizontal line.
C. The graph is rising as *x* increases.
D. The graph is falling as *x* increases.

128. Roberto was walking home after school. He stopped half way between his home and school to visit his friend who was sick. He then left his friend and walked the rest of the way home. Which graph represents Roberto's walk home?

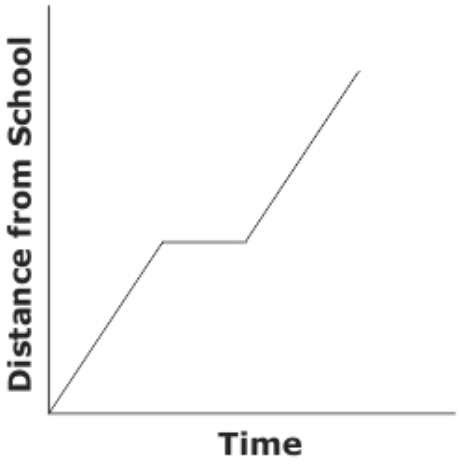
A.



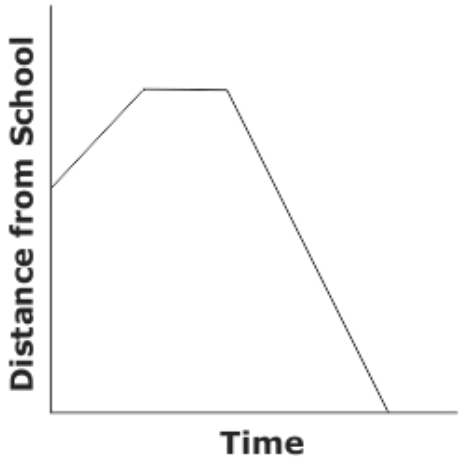
B.



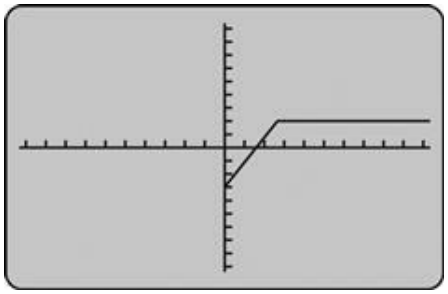
C.



D.



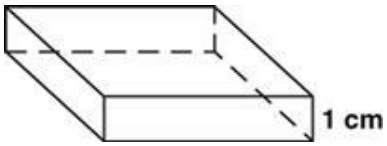
129. **The graphing calculator screen displays data on the temperature in degrees Fahrenheit of the inside of a freezer over several hours.**



What does the graphed data indicate?

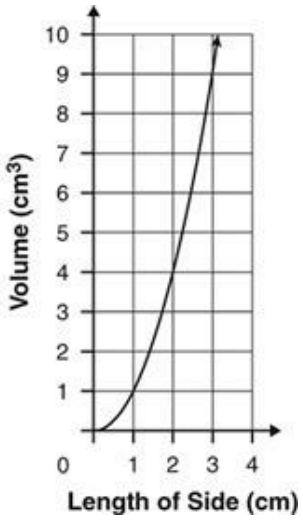
A. The temperature increased from a negative to a positive value, and then decreased.
B. The temperature increased from a positive value to a greater value, and then decreased.
C. The temperature increased from a negative to a positive value, and then remained constant.
D. The temperature increased from a positive value to a greater value, and then remained constant.

130. **The rectangular prism has a square base.**

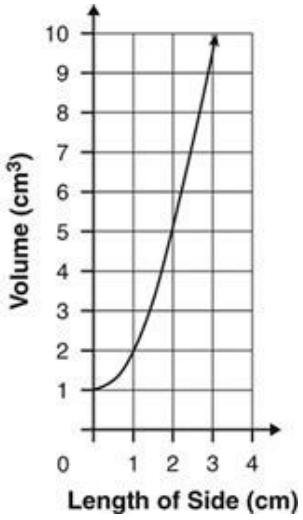


Which graph represents the volume of the prism if its height is 1 centimeter, and the edge lengths of the square are increasing?

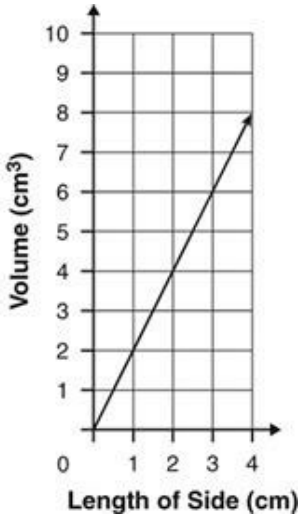
A.


Volume (cm³)
10
9
8
7
6
5
4
3
2
1
0
1
2
3
4
Length of Side (cm)

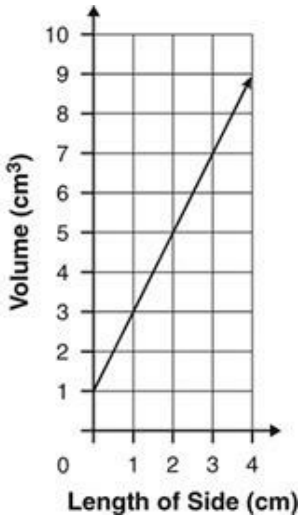
B.


Volume (cm³)
10
9
8
7
6
5
4
3
2
1
0
1
2
3
4
Length of Side (cm)

C.


Volume (cm³)
10
9
8
7
6
5
4
3
2
1
0
1
2
3
4
Length of Side (cm)

D.



131.

132.

133.

134.

135.

136.

137.

138.

139.

140.

141.

142.

143.

144.