Standardized Test

Name _____ Date _____

1. If Taylor drove 217 miles in $3\frac{1}{2}$ hours, what was her average speed?

a. 72 miles per hour

b. 54.3 miles per hour

c. 69.6 miles per hour

d. 62 miles per hour

2. Paulina is driving 45 miles per hour. Which equation gives the distance d she travels after h hours?

a. $d = 45h$

b. $d = h \div 45$

c. $d = h + 45$

d. $d = h - 45$

3. To convert a distance between miles and feet, you can use the equation $f = 5280m$, where f represents the number of feet and m represents the number of miles. In this equation, which describes the role of f?

a. the dependent variable

b. the independent variable

c. the dependent quantity

d. the independent quantity

4. Roy is hiking down a mountain at a rate of 3 miles per hour. He started at the top of the mountain on a 12.5-mile trail to his tent camp. Which is the dependent variable in this problem situation?

a. time

b. distance

c. altitude

d. speed

5. The cost of a small cup of coffee at a deli is \$3.50. You can use the equation $t = 3.5n$, where t represents the total money made from the sale of small coffees and n is the number of cups of small coffees sold. In this equation, which describes the role of n?

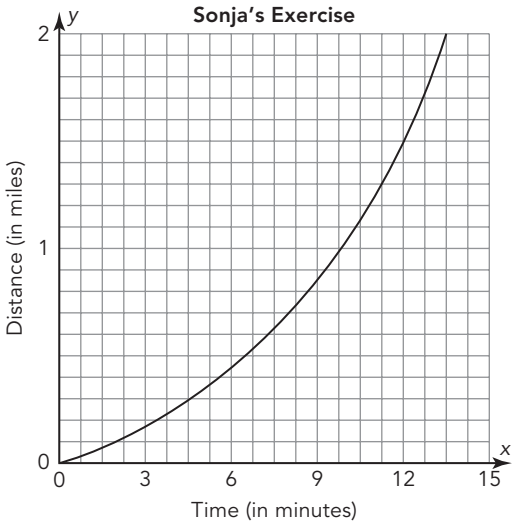
a. the dependent variable

b. the independent variable

c. the dependent quantity

d. the independent quantity

6. Sonja is running laps on the track. Which description best matches what is shown on the graph?



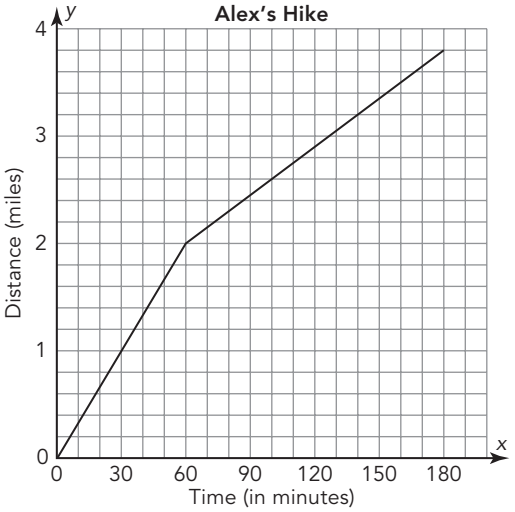
a. Sonja's running slowly decreased for the first 3 minutes, and then her running increased quickly.

b. Sonja's running slowly increased for the first 3 minutes, and then her running increased quickly.

c. Sonja slowly increased speed the entire time she ran laps.

d. Sonja slowly decreased speed the entire time she ran laps.

7. Alex is hiking a mountain trail. Which description best matches what is shown on the graph?



a. Alex hiked steadily for the first 60 minutes, and then he took a rest.

b. Alex hiked steadily up the trail for 60 minutes, and then he hiked back.

c. Alex hiked at one pace for 60 minutes, then he decreased his pace for the remainder.

d. Alex hiked slowly for 60 minutes, then he increased his pace for the remainder.

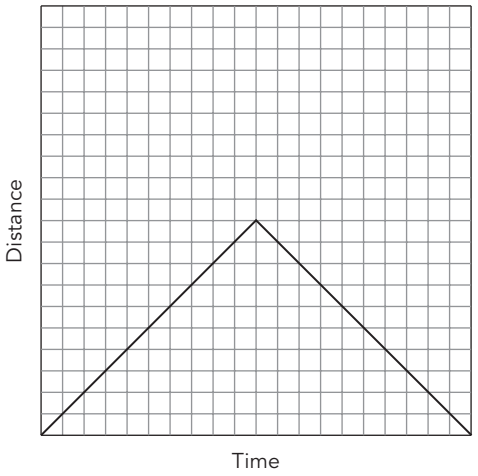
8. Which situation could best be represented by the graph?

a. Felicia ran to the bus stop and waited for the bus.

b. George rode his bike to the library, got a book, and then rode back home.

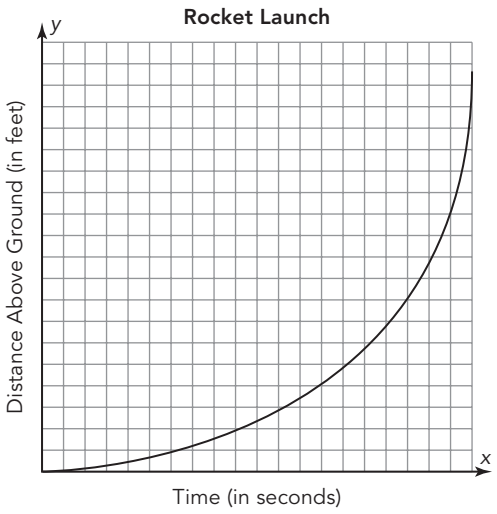
c. Laura climbed up the rock wall and climbed right back down again.

d. Carl waited at school for his ride home.

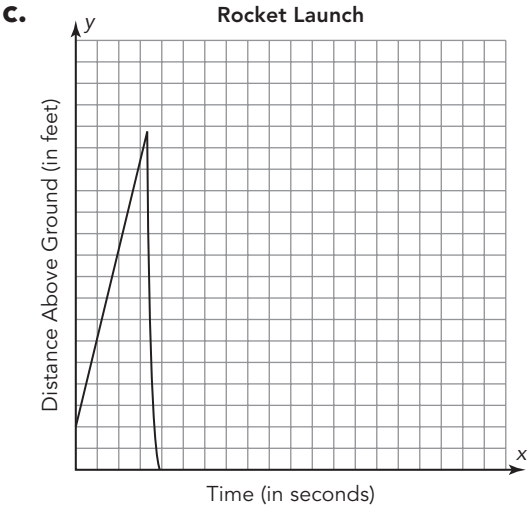


9. Stef is launching her model rocket from a 10-foot platform. On her first launch, the rocket sputtered, flew up about 10 feet, and fell to the ground. Which graph best represents this situation?

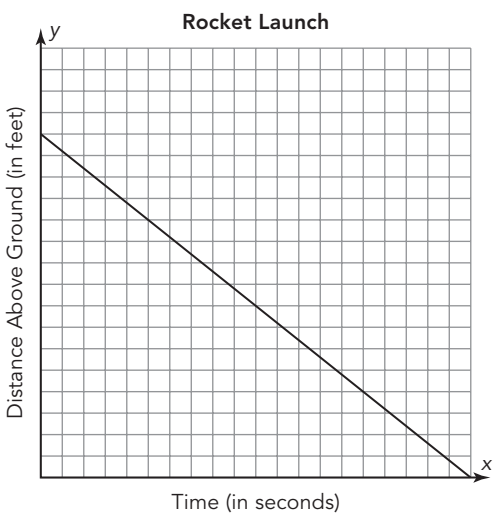
a.



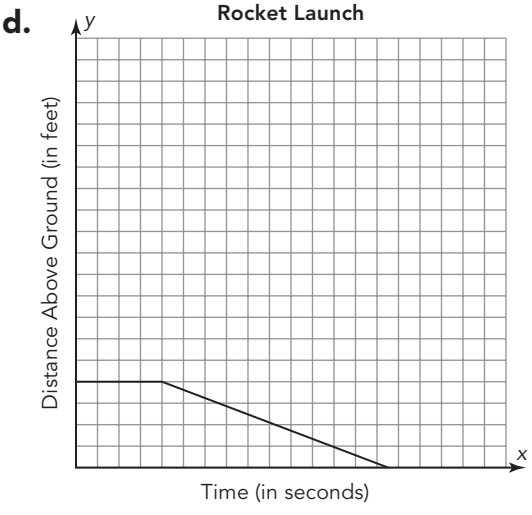
c.



b.



d.



10. If you jog at an average rate of 6.5 miles per hour, which equation expresses the relationship between your jogging time and your distance?

a. $t = \frac{d}{6.5}$

b. $t = \frac{6.5}{d}$

c. $t = 6.5d$

d. $t = d - 6.5$

11. Sara works in an ice cream shop. The table shows the number of hours she worked during each of the past four weeks and the amount she earned each week.

Time Worked (hours)	Amount Earned (dollars)
15	127.50
16.5	140.25
12.5	106.25
17	144.50

Let t represent the time in hours and let a represent the amount earned in dollars. Which equation models the relationship between these variables?

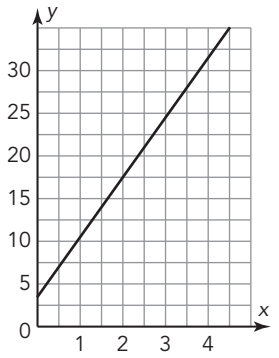
a. $t = 8.25a$

b. $t = 8.5a$

c. $t = \frac{a}{8.25}$

d. $t = \frac{a}{8.5}$

12. You bought books from an online book store that charges a flat fee for shipping each order. There was no sales tax on this purchase. The graph shows the cost of purchasing x books. About how much did the books cost if the total purchase was $31.50?



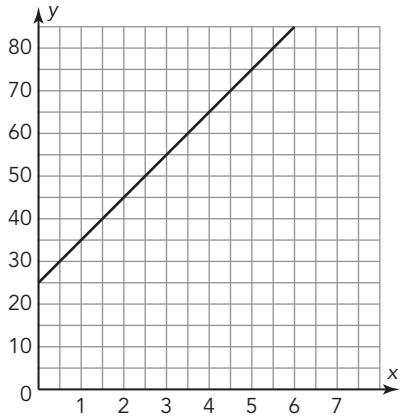
a. $3.50

b. $7.00

c. $28.00

d. $31.50

13. A kayak rental company charges a flat fee for the rental plus a fee per hour. The graph shows the cost of renting a kayak for x hours. About how much does it cost only for the hours of the rental if the total cost was $45.00?



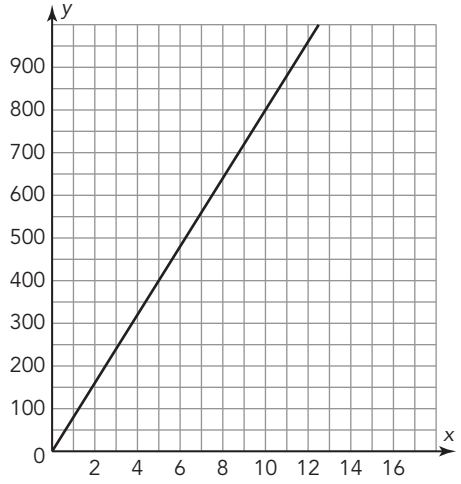
a. $10.00

b. $20.00

c. $25.00

d. $45.00

14. The graph shows the distance traveled by a train over x hours. Which of the inequalities shows when the train has traveled at least 400 miles?



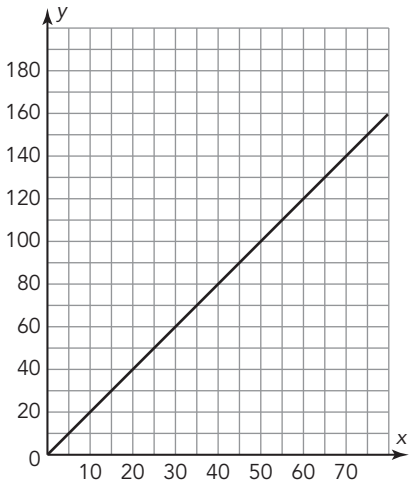
a. $x \geq 400$

b. $x \geqslant 5$

c. $x > 400$

d. $x > 5$

15. The graph shows the profit from the sale of raffle tickets given x number of tickets. Which of the inequalities shows the profit will be more than $120?



a. $x \geqslant 120$

b. $x \geqslant 60$

c. $x > 120$

d. $x > 60$

16. The number of dairy cows in a farm can vary from month to month. The amount of milk produced each month depends on the number of dairy cows on the farm. If g is the number of gallons of milk produced and n is the number of dairy cows on the farm, which of the following statement or statements are true about the variables?
Select all that apply.

a. g is the independent variable

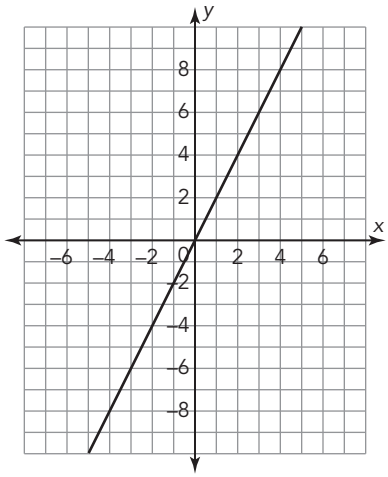
b. g is the dependent variable

c. n is the independent variable

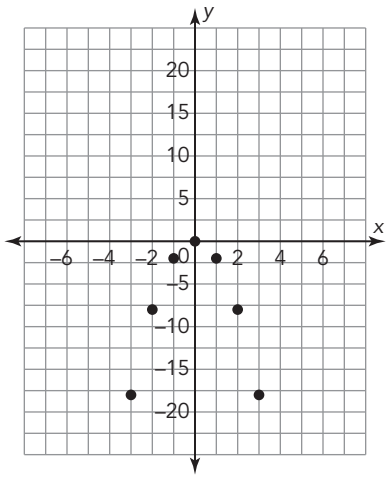
d. n is the dependent variable

17. Which of the graphs show discrete functions? Select all that apply.

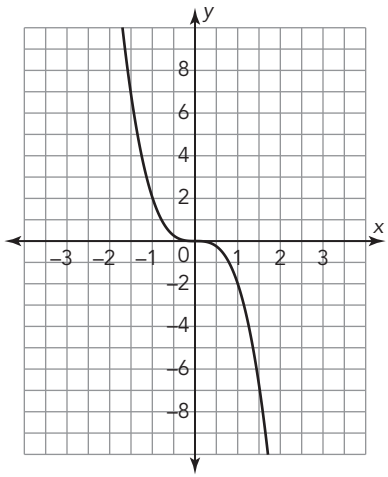
a.



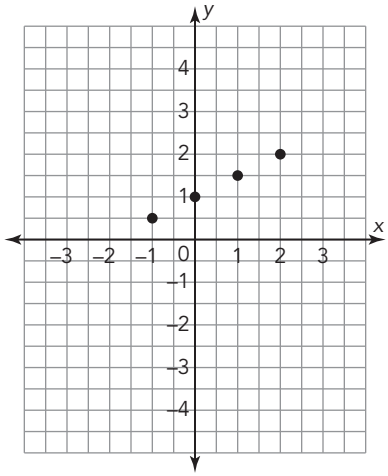
c.



b.

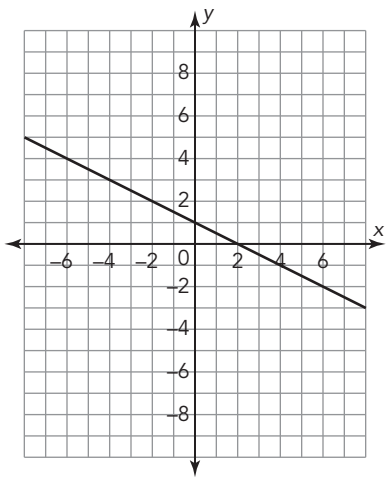


d.

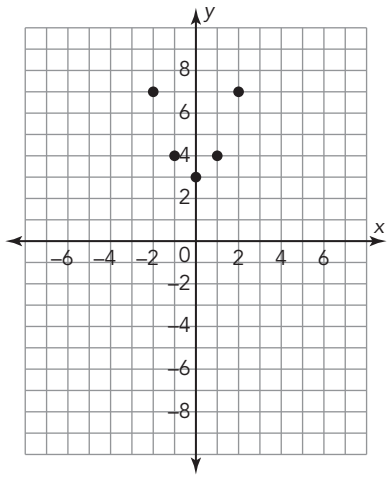


18. Which of the graphs show continuous functions? Select all that apply.

a.



b.



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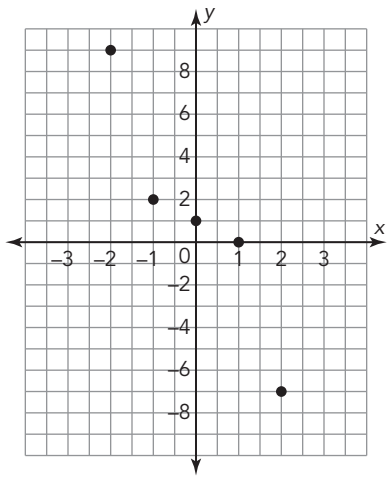

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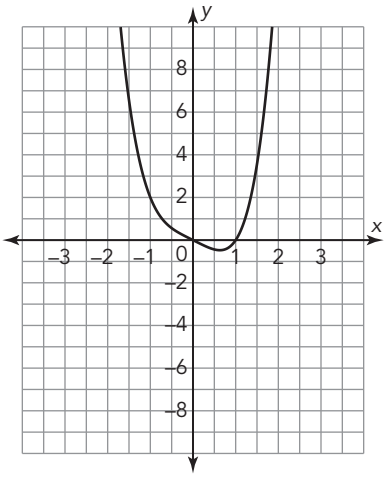
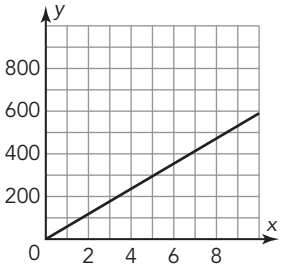


19. The graph shows the distance Maggie traveled at a constant rate for a number of hours. Which of the following describe the variables and equation for this scenario? Select all that apply.



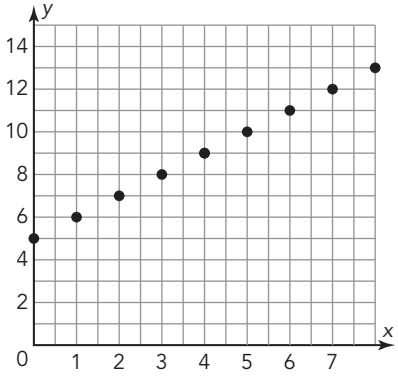
a. x represents the number of hours

b. y represents the number of hours

c. $y = 59x$

d. $y = 59 + x$

20. The graph shows the amount of money Sam has in his savings account each week. A line passes through the points. Which of the following statements about the graph are true? Which equation represents the line that passes through the points? Select all that apply.



a. x represents the amount in savings

b. y represents the amount in savings

c. $y = x + 5$

d. $y = 5x$