Enhanced End of Topic Assessment

Name _____ Date _____

Part A: Multiple-Choice Questions

1. Which of the following does **NOT** represent the distance a car travels when going 75 miles per hour?

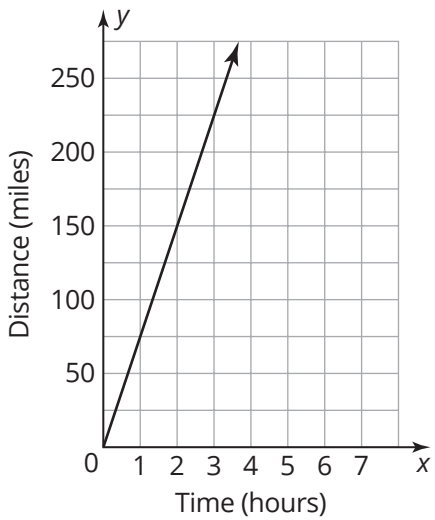
a. In 1 hour and 15 minutes, a car travels $93\frac{3}{4}$ miles.

b. $d = 75t$, where d represents the distance in miles and t represents time in hours.

c.

Time (hours)	Distance (miles)
0.5	42.5
1.5	117.5
2.25	173.75
2.5	192.5

d.



2. A real estate agent received a $17,500 commission on the sale of a $350,000 house on Walnut Street. The same agent received a $20,000 commission on the sale of a house on Center Avenue. What was the sale price of the house on Center Avenue?

a. $100,000

b. $370,000

c. $400,000

d. $450,000

3. The amount of chlorine needed to treat a swimming pool is directly proportional to the volume of the pool.

Chlorine (c)	Volume of Pool (p)
5	2500
10	5000
15	7500

What is the constant of proportionality for this relationship?

a. 0.002

b. 0.02

c. 0.2

d. $\frac{1}{2}$

4. Paris rode her bike at a constant rate of 0.3 kilometer per minute. Which table represents *y*, the number of kilometers Paris rode her bike, in *x* minutes?

a.

Number of Minutes, *x*	Number of Kilometers, *y*
5	0.3
10	0.3
15	0.3
20	0.3
25	0.3

b.

Number of Minutes, *x*	Number of Kilometers, *y*
5	0.3
10	0.6
15	0.9
20	1.2
25	1.5

c.

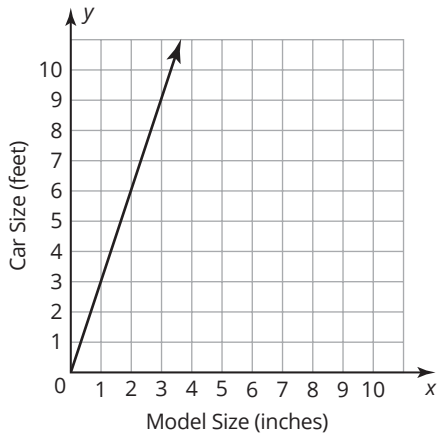
Number of Minutes, *x*	Number of Kilometers, *y*
5	1.5
10	3.0
15	4.5
20	6.0
25	7.5

d.

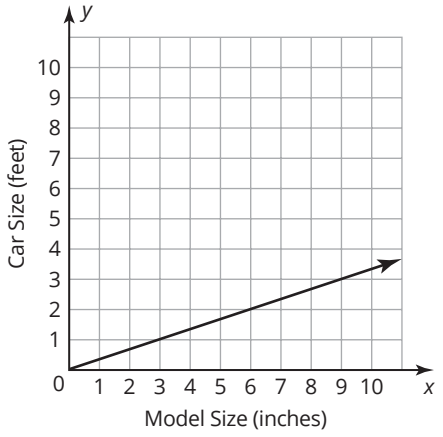
Number of Minutes, *x*	Number of Kilometers, *y*
5	1.5
10	2.5
15	3.5
20	4.5
25	5.5

5. Joshua makes a scale model of a car. On the model, 3 inches represent 1 foot on the actual car. Which graph represents this relationship?

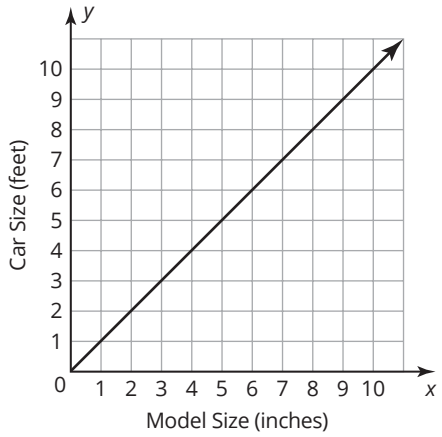
a.



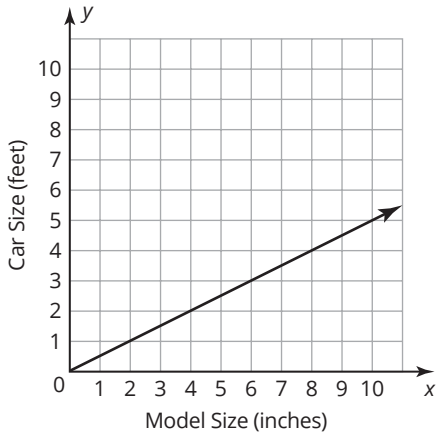
b.



c.



d.

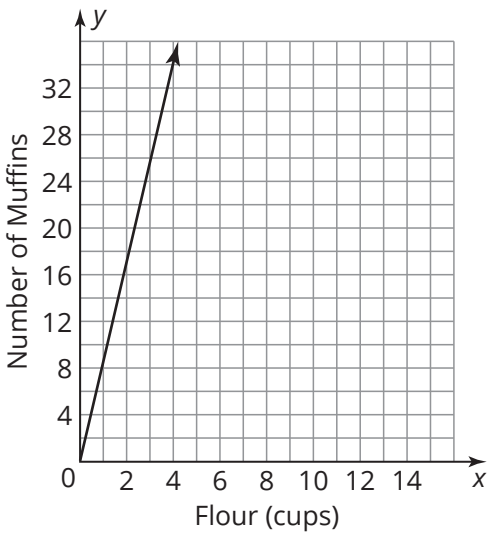


Part B: Open-Response Questions

6. The table shows the number of times each kind of bicycle was rented during two months from Jim's Rentals. Determine whether the relationship is proportional by identifying whether a constant of proportionality exists between the road bikes rented and the mountain bikes rented. Explain your reasoning.

Month	Road Bike	Mountain Bike
May	425	300
June	680	575

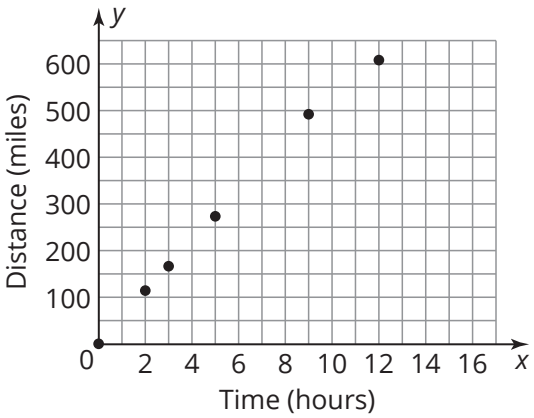
7. A recipe for apple muffins calls for 3 cups of flour to make 24 muffins. The graph shows the cups of flour needed for different amounts of muffins.



a. What is the constant of proportionality that relates the number of muffins to the number of cups of flour used?

b. What does the constant of proportionality mean in terms of this problem situation?

8. The graph and table show the distance *d* Cataline drives over time *t*.



Distance (miles)	Time (hours)
110	2
165	3
275	5
495	9
660	12

a. Does the distance away from home vary directly with the time? How do you know?

b. Determine the constant of proportionality. Explain how you calculated it.

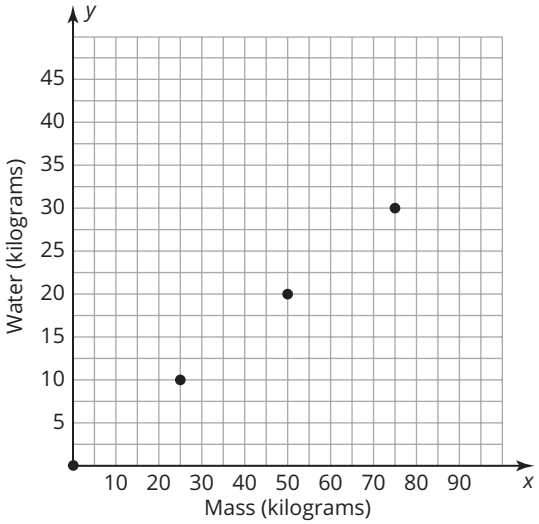
c. What does *k* represent in this situation?

d. Write an equation to represent the relationship between distance and time. Then, determine how far Catalina will drive in $3\frac{3}{4}$ hours.

Part C: Griddable Response Questions

Record your answers and fill in the bubbles. Be sure to use the correct place value.

9. The graph represents the proportional relationship between the amount of water in a person's body and the person's mass.

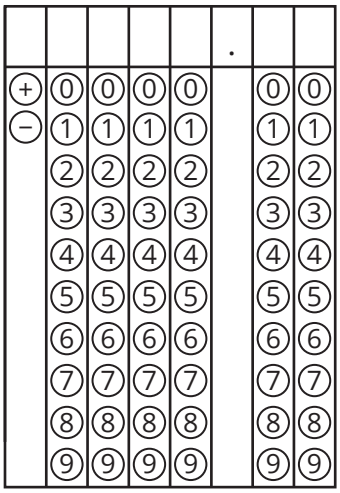


What is the constant of proportionality for the relationship between the amount of water in a person's body and the person's mass? Write your answer as a decimal.

					.		
+	0	0	0	0		0	0
−	1	1	1	1		1	1
	2	2	2	2		2	2
	3	3	3	3		3	3
	4	4	4	4		4	4
	5	5	5	5		5	5
	6	6	6	6		6	6
	7	7	7	7		7	7
	8	8	8	8		8	8
	9	9	9	9		9	9

10. The number of campers who sign up for archery each week is listed in the table. If the relationship is proportional, how many campers will sign up for archery in Week 3?

Week	Archery Sign-Up	Total Campers
1	36	120
2	45	150
3	?	130



11. The weight of a person on Venus is directly proportional to their weight on Earth. A person weighing 120 pounds on Earth weighs 106 pounds on Venus. Approximately how much would a person weighing 180 pounds on Earth weigh on Venus?