

Name _____ Period _____ Date _____

PART 1 - Grade 7 Unit 2 Model Curriculum Assessment – NO CALCULATOR

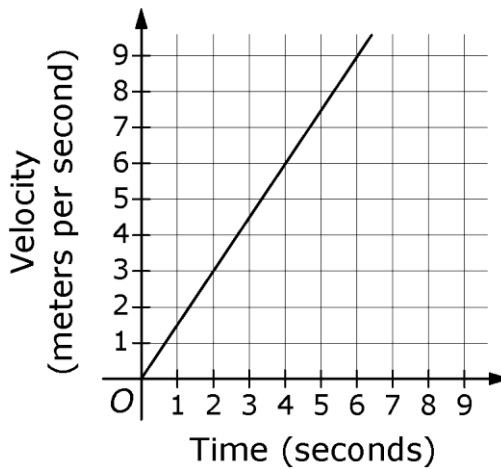
1. The equation below shows the relationship between the number of apples purchased, a , and the total cost of the apples in dollars, c . Based on the equation, what is the cost per apple, in dollars?

$$\frac{a}{5} = \frac{c}{4}$$

- a. \$0.80
b. \$1.25
c. \$4.00
d. \$5.00
2. The table below shows the amounts of cooked rice that can be made using different amounts of dry rice. Based on the information in the table, how many cups of cooked rice can be made from 1 cup of dry rice?

Amount of Dry Rice (cups)	$\frac{2}{3}$	$\frac{3}{4}$	$1\frac{1}{3}$	$1\frac{3}{4}$
Amount of Cooked Rice (cups)	$2\frac{2}{3}$	3	$5\frac{1}{3}$	7

3. The graph below shows the relationship between velocity and time for a car.



Acceleration is defined as the change in velocity with respect to time. What is the acceleration of the car in meters per second every second?

- a. $\frac{1}{2}$
 - b. $\frac{2}{3}$
 - c. $1\frac{1}{2}$
 - d. $1\frac{2}{3}$
4. The number of students attending the seventh-grade class trip is 4 times the number of teachers attending. What is the ratio of teachers to students attending the class trip?

5. A recipe that makes 8 servings requires $3\frac{1}{2}$ cups of milk. Which of the following equations can be used to find the number of servings, x , that can be made using 14 cups of milk, based on the recipe?

a. $\frac{3\frac{1}{2}}{8} = \frac{x}{14}$

b. $\frac{8}{3\frac{1}{2}} = \frac{x}{14}$

c. $\frac{3\frac{1}{2}}{14} = \frac{x}{8}$

d. $\frac{14}{8} = \frac{x}{3\frac{1}{2}}$

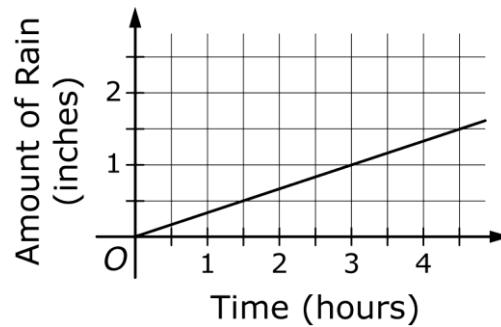
6. Mark reads 42 pages of a book every $\frac{3}{4}$ hour. Write an equation that models the relationship between x , the number of hours Mark reads, and y , the number of pages of the book he reads.

7. A car consumes 9.6 gallons of gasoline during a 336-mile trip. Write a proportion that can be used to find m , the number of miles that the car can travel using 24 gallons of gasoline if the car consumes gasoline at the same rate consumed during the trip. Do **NOT** solve the proportion.
8. A machine can enlarge a 6-inch by 4-inch rectangular photograph to any of the dimensions shown in the table below. Which equation represents the relationship between ℓ , the length of the enlargement, and w , the width of the enlargement?

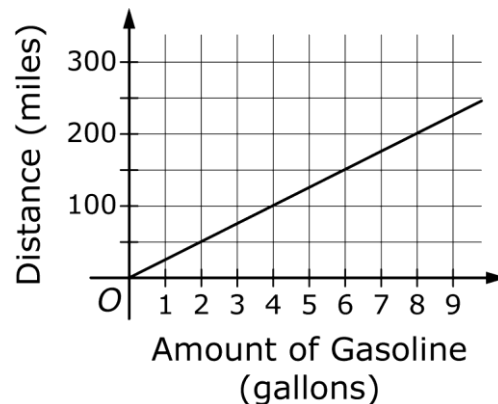
Length (inches)	Width (inches)
12	8
18	12
24	16

- a. $w = \ell - 4$
- b. $w = \ell - 6$
- c. $w = \frac{2}{3}\ell$
- d. $w = \frac{3}{2}\ell$

9. The graph below shows the total number of inches of rain that fell, y , in terms of time the rain fell, x . The time is measured in hours after 12:00 P.M., with $x = 0$ corresponding to the time 12:00 P.M. Explain the meaning of the point $0, 0$ in the context of this problem.



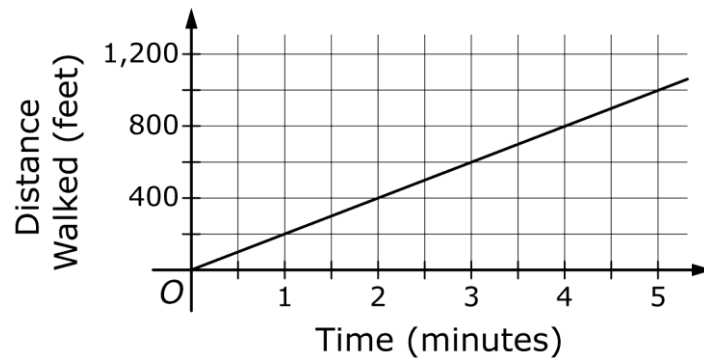
10. The graph below shows the distance a car can travel, y , using x gallons of gasoline. Show your work or explain your answer to each of the following questions.



Part A: How many miles per gallon does the car get?

Part B: How many miles can the car travel using 9 gallons of gasoline?

11. The graph below relates y , the distance Kelly walked, to x , the amount of time that Kelly walked.



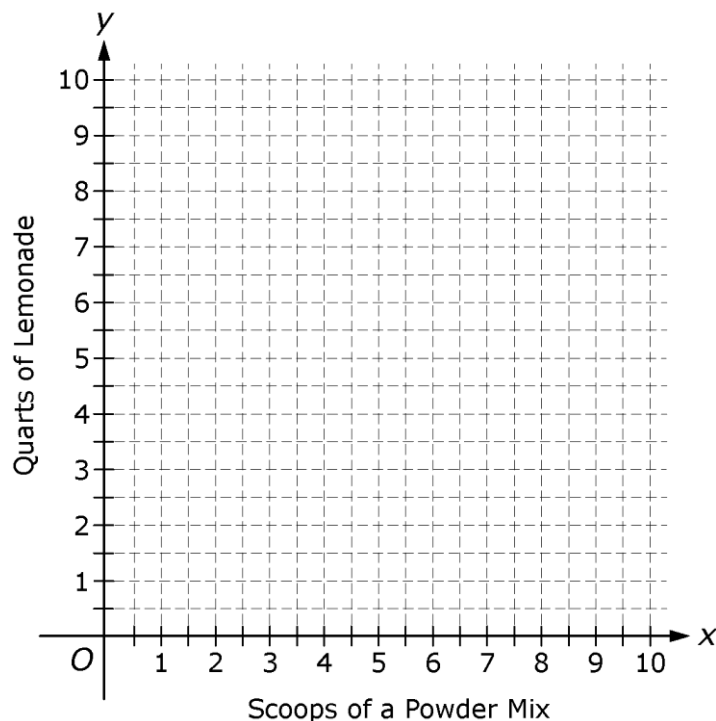
Part A: What is the value of y when $x = 1$?

Part B: Explain how you can use your answer to Part A to predict, within the context of the situation, where Kelly is at time t minutes.

12. The equation below represents the relationship between x and y , where y represents the number of quarts of lemonade that can be made from x scoops of a powder mix.

$$\frac{x}{y} = \frac{5}{2}$$

Part A: On the grid below, graph the equation $\frac{x}{y} = \frac{5}{2}$.



Part B: Use the graph to determine the number of scoops of powder mix required to make 3 quarts of lemonade.



YOU HAVE COMPLETED THE NON-CALCULATOR PORTION.
COLLECT A CALCULATOR FROM YOUR TEACHER.

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PART 2 - Grade 7 Unit 2 Model Curriculum Assessment –CALCULATOR

13. Mario walked at a rate of $\frac{2}{3}$ mile every 10 minutes.

What was his walking rate in miles per hour?

- a. 4
- b. $6\frac{2}{3}$
- c. 9
- d. 15

14. A store sells a $1\frac{1}{4}$ pound package of turkey for \$9.

What is the unit price of the turkey in the package?

- a. \$11.25 per pound
- b. \$10.25 per pound
- c. \$7.75 per pound
- d. \$7.20 per pound

15. Angela paints a wall that has an area of $42\frac{2}{3}$ square yards.

She uses $1\frac{1}{3}$ gallons of paint.

Part A: What is Angela's rate of paint coverage in square yards per gallon? Show your work.

Part B: The label on the paint container states that its average coverage rate is 275 square **feet** per gallon. What is the difference in square **feet** per gallon between Angela's rate of paint coverage and the average rate indicated on the label on the container? Show your work.
(Note: 1 square yard = 9 square feet)

16. Jared runs on a track that is $\frac{1}{4}$ mile long. Today, Jared ran 6 times around the track in $13\frac{1}{2}$ minutes. Did Jared run faster or slower than 6 miles per hour during today's run? Use numbers and words to explain how you determined your answer.

17. Which of the following tables shows a proportional relationship between x and y ?

a.

x	y
3	2
9	4
27	8
81	16

b.

x	y
3	2
6	4
9	6
12	8

c.

x	y
3	2
6	5
9	8
12	11

d.

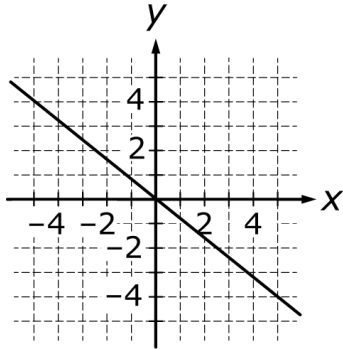
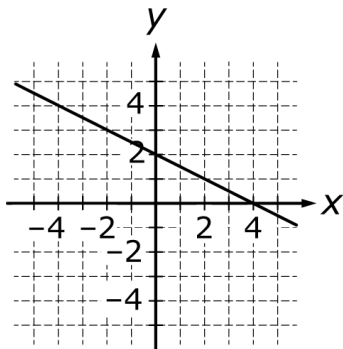
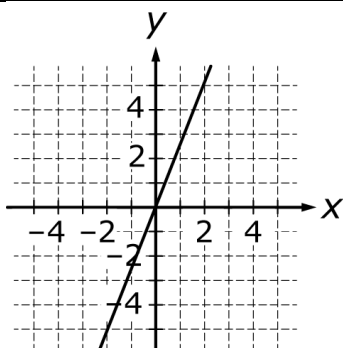
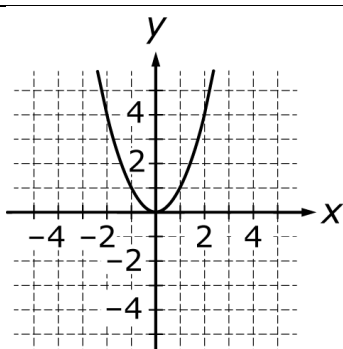
x	y
3	2
5	3
7	4
9	5

18. Nina saved money in her piggy bank to buy a music player. She started by saving \$30 that she received for her birthday, and then she saved \$10 from her allowance each month for 6 months. The table below shows the total amount of money Nina had saved at the end of each month for 6 months.

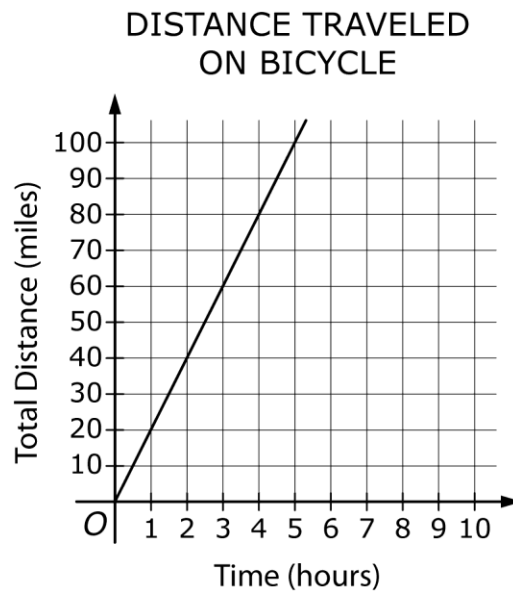
Number of Months	Total Amount of Money Nina Saved
1	\$40
2	\$50
3	\$60
4	\$70
5	\$80
6	\$90

Is the relationship shown in the table between the number of months and the total amount of money Nina saved a proportional relationship? Explain your reasoning.

19. For each of the relationships between x and y shown on the graphs in the table below, indicate whether the relationship between x and y is proportional by checking the appropriate box in the table.

	Yes	No
		
		
		
		

20. The total distance Jim traveled on his bicycle during a 5-hour period is shown in the graph below.



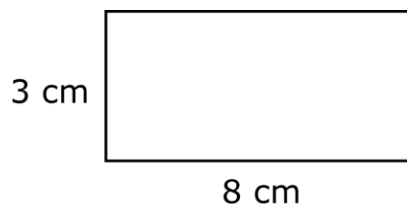
Is the total distance proportional to the time? Explain your answer.

21. On a map, $\frac{1}{4}$ inch between locations represents an actual distance of 2 miles between the locations. What is the actual distance, in miles, between two cities that are $3\frac{3}{4}$ inches apart on the map?

- a. 6
- b. 15
- c. 24
- d. 30

22. Sandra deposited \$2,500 into a simple interest account. She earned \$75 in interest after 1 year. Ron deposited \$8,000 into an account that has the same interest rate as Sandra's account. How much money did Ron earn in interest after 1 year? Show your work.

23. Joe made a scale drawing of the community pool in his town. The scale drawing is shown below. The pool is rectangular and has a perimeter of 77 meters. What are the length and width, in meters, of the pool? Show your work.



24. As a real estate agent, Lauren earns 2.5% commission on her sales. Lauren's goal is to earn \$5,000 in commission this month. What is the dollar amount of sales that Lauren must have this month to earn \$5,000 in commission?
- a. \$5,125
 - b. \$12,500
 - c. \$20,000
 - d. \$200,000

25. Justin is mixing punch for his birthday party. His recipe calls for $2\frac{1}{2}$ cups of cranberry juice and serves 12 people. Using the recipe, how many more cups of cranberry juice are needed to make punch for 18 people than are needed to make punch for 12 people?

- a. $1\frac{1}{4}$
- b. $2\frac{1}{2}$
- c. 6
- d. $7\frac{1}{2}$

26. There are 15 students in Mr. Weiss's chess club. The ratio of the number of boys to the number of girls in the club is 3 : 2. If the number of boys in the club does not change, how many additional girls would need to join the club in order for the ratio of the number of boys to the number of girls in the club to be 1 : 1?

- a. 3
- b. 6
- c. 9
- d. 12

27. There were 450 students enrolled in a middle school at the beginning of the school year. The number of students enrolled in the school at the end of the year was 10 percent greater than the number of students enrolled in the school at the beginning of the year. How many students were enrolled in the school at the end of the year?
- a. 45
 - b. 460
 - c. 495
 - d. 500
28. Ali and Renu are buying concert tickets from a web site. There is an 18% service fee for every ticket bought from the site. If the cost of 2 tickets, including the service fee, was \$59, what was the cost of each ticket before applying the service fee? Show your work.
29. Stacia was 5 feet tall on her 12th birthday and 5 feet 3 inches tall on her 13th birthday. What was the percent increase in Stacia's height from her 12th birthday to her 13th birthday? Show your work.