

Name: _____
IS 73

Date: _____
Class: _____

7th Grade UNIT 2 Proportional Relationships REVIEW PACKET

Questions 1 - 20 are similar to the 20 multiple choice questions on the post test and will be worth 4 points each on the test.
Show work for all questions in this review packet.

7.RP.1

1. Juan ran $\frac{2}{5}$ of a mile every $\frac{4}{7}$ of an hour. Find Juan's rate in miles per hour.

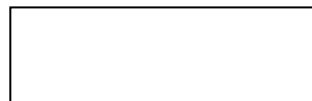
7.RP.1

2. A recycling plant processes an average of $\frac{1}{5}$ ton of glass each minute. At approximately what rate does the recycling plant process glass, in tons per day? (1 day = 24 hours)

7.RP.1

3. Wallpaper was applied to one rectangular wall of a large room. The dimensions of the wall are shown below.

14.5 ft



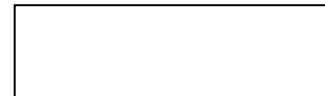
32 ft

If the total cost of the wallpaper was \$389.76, what was the cost, in dollars, of the wallpaper in square feet?

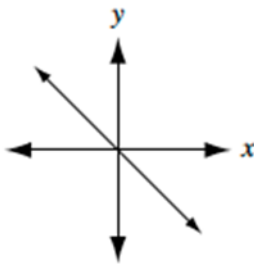
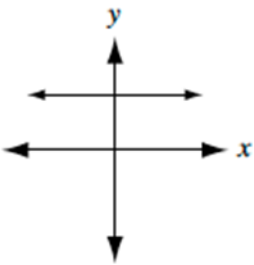
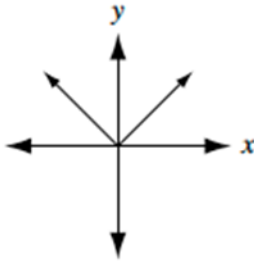
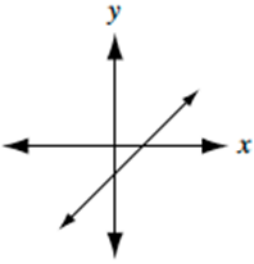
TRY ANOTHER PROBLEM LIKE THE ONE ABOVE

If the total cost of the wallpaper was \$107.64, what was the cost, in dollars, of the wallpaper in square feet?

9 ft



11.5 ft

7.RP.1	<p>4. The elevation at ground level is 0 feet. An elevator starts 80 feet below ground level. After traveling for 20 seconds, the elevator is 30 feet below ground level. Which statement describes the elevator's rate of change in elevation during this 20-second interval?</p> <p>A. The elevator traveled upward at a rate of $2\frac{1}{2}$ feet per second.</p> <p>B. The elevator traveled downward at a rate of $2\frac{1}{2}$ feet per second.</p> <p>C. The elevator traveled upward at a rate of 4 feet per second.</p> <p>D. The elevator traveled downward at a rate of 4 feet per second.</p>
7.RP.2a	<p>5. Which set of ratios are equivalent?</p> <p>A. $\frac{1}{5} = \frac{9}{20}$</p> <p>B. $\frac{1}{1} = \frac{17}{7}$</p> <p>C. $\frac{36}{19} = \frac{2}{1}$</p> <p>D. $\frac{4}{2} = \frac{8}{4}$</p>
7.RP.2a	<p>6. Which graph shows a proportional relationship?</p> <p>5. Which represents a proportional relationship?</p> <p>A. </p> <p>B. </p> <p>C. </p> <p>D. </p>

7.RP.2a

7. Which table shows a proportional relationship?

A.	<table border="1"><thead><tr><th>X</th><th>Y</th></tr></thead><tbody><tr><td>-1</td><td>9</td></tr><tr><td>0</td><td>0</td></tr><tr><td>1</td><td>9</td></tr><tr><td>2</td><td>18</td></tr></tbody></table>	X	Y	-1	9	0	0	1	9	2	18
X	Y										
-1	9										
0	0										
1	9										
2	18										

B.	<table border="1"><thead><tr><th>X</th><th>Y</th></tr></thead><tbody><tr><td>-1</td><td>-8</td></tr><tr><td>0</td><td>0</td></tr><tr><td>1</td><td>8</td></tr><tr><td>2</td><td>10</td></tr></tbody></table>	X	Y	-1	-8	0	0	1	8	2	10
X	Y										
-1	-8										
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C.	<table border="1"><thead><tr><th>X</th><th>Y</th></tr></thead><tbody><tr><td>-1</td><td>-5</td></tr><tr><td>0</td><td>0</td></tr><tr><td>1</td><td>10</td></tr><tr><td>2</td><td>20</td></tr></tbody></table>	X	Y	-1	-5	0	0	1	10	2	20
X	Y										
-1	-5										
0	0										
1	10										
2	20										

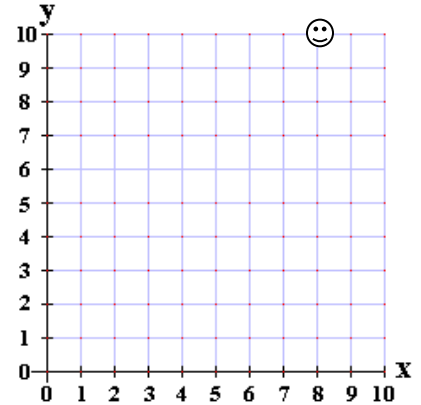
D.	<table border="1"><thead><tr><th>X</th><th>Y</th></tr></thead><tbody><tr><td>-1</td><td>-3</td></tr><tr><td>0</td><td>0</td></tr><tr><td>1</td><td>3</td></tr><tr><td>2</td><td>6</td></tr></tbody></table>	X	Y	-1	-3	0	0	1	3	2	6
X	Y										
-1	-3										
0	0										
1	3										
2	6										

7.RP.2a

8. Line KN represents a proportional relationship. Point N (labeled with the smiley face) lies at (8, 10) as shown on the graph to the right.

Which set of ordered pairs could represent the coordinates of point K?

- A. (5, 4)
- B. (2.5, 0)
- C. (2, 2.5)
- D. (1, 0.8)

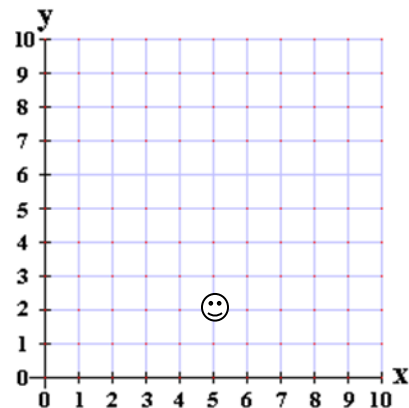


TRY ANOTHER PROBLEM LIKE THE ONE ABOVE

Line KN represents a proportional relationship. Point N (labeled with the smiley face) lies at (5, 2) as shown on the graph to the right.

Which set of ordered pairs could represent the coordinates of point K?

- A. (4, 1.6)
- B. (3.2, 8)
- C. (6, 15)
- D. (0, 2.5)



7.RP.2b

9. Peter's mom wants to compare the unit prices of his favorite cereal. Using the table below, which store has the better buy per ounce of cereal?

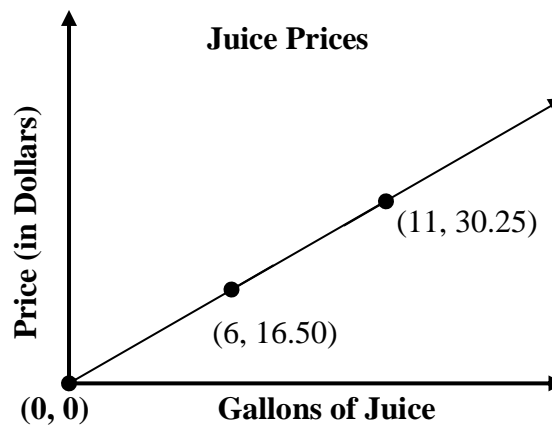
Store	Weight (oz.)	Total Price	Price per oz.
Walmart	15 oz.	\$10.50	
Pathmark	19 oz.	\$11.40	

7.RP.2b

10. A 9 oz. bottle of hot sauce costs \$8.10. If the unit price remains the same, how much would a 12 oz. bottle of hot sauce cost?

7.RP.2b

11. Calculate the constant of proportionality from the graph to the right.



7.RP.2b

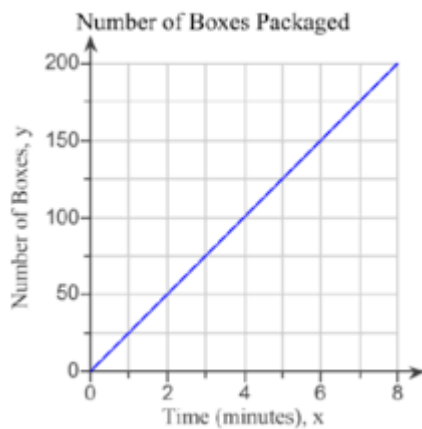
12. The number of bracelets Karla can make depends on the number of rolls of yarn she has. What is the constant of proportionality for the number of bracelets made per roll of yarn?

Rolls of Yarn	Bracelets
7	42
12	72

7.RP.2b

13. The graph below shows the relationship between miles and hours.

Determine the constant of proportionality from the graph below.



7.RP.2c

14. A company ordered 10 boxed lunches from the deli for \$86.50. Each bagged lunch cost the same amount. Which equation represents the proportional relationship between y , the total cost of the bagged lunches, and x , the number of bagged lunches?

A. $\frac{8.65}{x} = \frac{10}{y}$

B. $\frac{86.50}{x} = \frac{10}{y}$

C. $86.50x = y$

D. $8.65x = y$

7.RP.2c

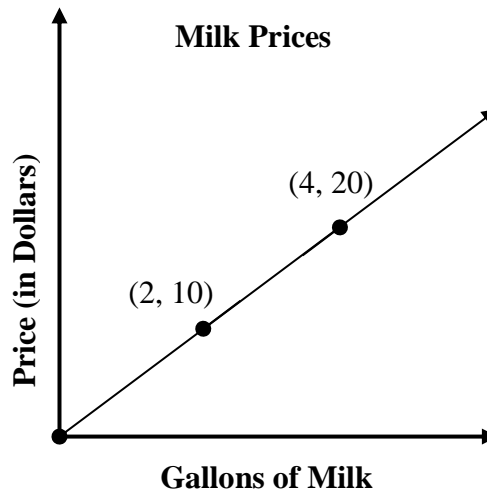
15. Which equation below describes the proportional relationship between q , the number of quizzes taken in w weeks?

- A. $q = 12w$
 B. $w = 12q$
 C. $q = 6w$
 D. $w = 6q$

Weeks (w)	Quizzes (q)
0	0
2	12
4	24
6	36
8	48

7.RP.2d

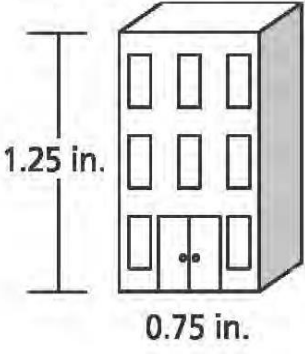
16. Identify the point that would represent the unit rate for the graph below?



7.RP.2d

17. A babysitter charges a fee for every hour they work. Which statement below could be a description of the point $(1, 8)$ from this situation?

- A. The babysitter gets paid \$8 for each hour they work.
 B. The babysitter charges \$1 for every 8 children they watch.
 C. The babysitter charges \$1 for every 8 hours they work.
 D. The babysitter gets paid \$8 for each child they watch.

7.G.1	<p>18. The drawing of a building, shown below, has a scale of 1 inch to 28 feet.</p> <p>What is the actual height, in feet, of the building?</p>  <p>The drawing shows a rectangular building with a height dimension line on the left labeled "1.25 in." and a width dimension line at the bottom labeled "0.75 in." The building has three windows on each of the two upper floors and a double door on the ground floor.</p>
7.G.1	<p>19. Two cities are 120 miles from each other. How far apart would the cities be on a map that has a scale of 0.6 in : 7.5 mi.?</p>
7.SP.2	<p>20. The results for a survey of 150 students who were selected randomly are listed below:</p> <ul style="list-style-type: none">• 80 students have a cell phone plan with company X• 34 students have a cell phone plan with company Y• 36 students do not have a cell phone <p>The total population of students was 600. Based on the data, what is the best approximation for the total number of students who have a cell phone plan with company Y?</p>

Questions 21 - 24 are similar to the 4 extended response questions on the post test and will be worth 5 points each on the test. You will be expected to show all work on this section to receive full credit on your post-test.

7.RP.1

21.

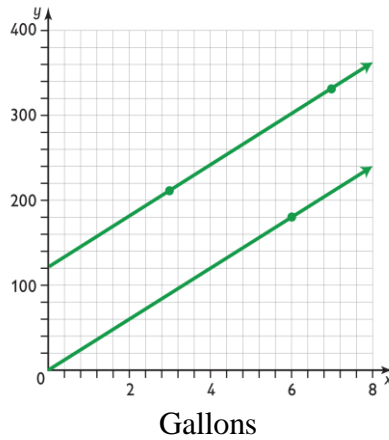
Solve for x: $\frac{1\frac{1}{6}}{1\frac{2}{3}} = \frac{x}{\frac{1}{2}}$

ANSWER: _____

7.RP.2a

22.

Oil Costs



For each line, explain whether or not there is a proportional relationship between the amount of oil, in gallons, and the cost, in dollars. If there is a proportional relationship, identify the constant of proportionality. Use details and characteristics of proportional relationships to support your answer.

7.RP.2b	<p>23. A grocery store sells two brands of mild. Brand M contains 8 fluid ounces and costs \$1.76. Brand N contains 12 fluid ounces and costs \$3.12. What is the difference in cost, in dollars, per fluid ounce between the two brands of juice?</p> <p>Show your work.</p> <p style="text-align: right;">ANSWER: _____</p>
7.RP.1	<p>24. A scientist uses a submarine to study ocean life.</p> <ul style="list-style-type: none">❖ <i>He begins at sea level, which is at an elevation of 0 feet.</i>❖ <i>He travels straight down for 60 seconds at a speed of 4.5 feet per second.</i>❖ <i>He then travels directly up for 40 seconds at a speed of 3.4 feet per second.</i> <p>After this 100-second period, how much time, in seconds, will it take for the scientist to travel back to sea level at the submarine's maximum speed of 5.2 feet per second?</p> <ul style="list-style-type: none">➤ Round your answer to the nearest tenth of a second.➤ Show your work. <p style="text-align: right;">ANSWER: _____</p>

2016 - 2017

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