

Test Practice

1. Multiple Choice Noreen can walk $\frac{1}{3}$ mile in 12 minutes. What is her average speed in miles per hour? (Lesson 1)

(A) 36 miles per hour

(B) 12 miles per hour

(C) $\frac{1}{4}$ mile per hour

(D) $1\frac{2}{3}$ miles per hour

$$\begin{array}{r} \text{mile} \quad \text{min} \\ \frac{1}{3} \times 12 = 4 \\ \frac{1}{3} \times 60 = 20 \\ \frac{1}{3} \times 60 = 20 \end{array}$$

$$\begin{array}{r} 1 \\ 3 \overline{) 5} \\ \underline{3} \\ 2 \end{array}$$

2. Open Response The table shows the amount spent on tomatoes at three different stands at a farmer's market. Which stand sold their tomatoes at the least expensive price per pound, and what is that price? Round to the nearest cent, if necessary. (Lesson 1)

Stand	Weight (lb)	Cost (\$)
A	$\frac{3}{4}$	2.00
B	$1\frac{1}{4}$	3.45
C	$5\frac{1}{2}$	14.85

point \$

$$\begin{array}{l} \text{A} \quad \frac{3}{4} \times 2 = 1.5 \\ \text{B} \quad \frac{5}{4} \times 3.45 = 4.3125 \\ \text{C} \quad \frac{11}{2} \times 14.85 = 81.675 \end{array}$$

3. Multiselect One recipe for homemade playdough calls for 4 parts flour, 1 part salt, and 2 parts water. Select all of the mixtures below that are in a proportional relationship with this recipe. (Lesson 2)

☒ 8 cups flour, 2 cups salt, 4 cups water

☐ 2 cups flour, $\frac{1}{2}$ cup salt, $\frac{1}{2}$ cup water

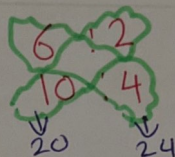
☒ 6 cups flour, $1\frac{1}{2}$ cups salt, 3 cups water

☐ 10 cups flour, 1 cup salt, 2 cups water

flour salt water

$$\begin{array}{ccc} \text{flour} & \text{salt} & \text{water} \\ 4 & 1 & 2 \\ 8 & 2 & 4 \\ 2 & \frac{1}{2} & 1 \\ 6 & \frac{3}{2} & 3 \\ 10 & \frac{5}{2} & 5 \end{array}$$

4. Open Response The ratio of Braydon's number of laps he ran to the time he ran is 6:2. The ratio of Monique's number of laps she ran to the time she ran is 10:4. Explain why these ratios are not in a proportional relationship. (Lesson 2)



Not equivalent or Not proportion

5. Open Response One month, Miko bought two books at a used book store for a total of \$2. Over the next few months, she bought four books for a total of \$5, six books for a total of \$7, and eight books for a total of \$10. Is the cost proportional to the number of books purchased? Explain. (Lesson 3)

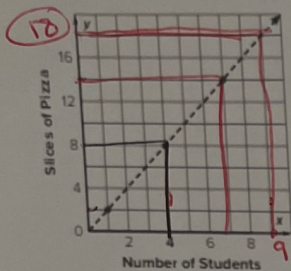
book	2	4	6	8
cost \$	2	5	7	10
	8	10	N.P	

6. Table Item The table shows the time and distance Hector walked in a 5-kilometer-long walk for charity. The distance is proportional to the time walked. Complete the table to show the times of his last three walks. (Lesson 3)

Distance (km)	Time (min)
1.5	13.5
2	18
4.5	40.5
5	45

$$\begin{array}{l} 2 \times 13.5 = 27 \\ 1.5 \times 18 = 27 \\ 4.5 \times 9 = 40.5 \\ 5 \times 9 = 45 \end{array}$$

7. **Multiselect** The relationship between the number of slices of pizza purchased and the number of students served is shown in the graph. Select all of the statements that are true. (Lesson 4)



☒ The relationship is proportional.

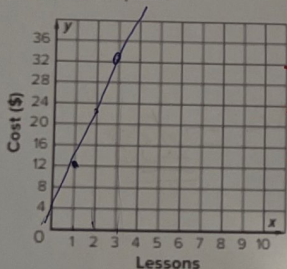
☒ The point (9, 18) satisfies this relationship.

☒ The constant of proportionality is $\frac{1}{2}$.

☒ The constant of proportionality is 2.

8. **Grid** The cost of dance lessons is \$12 for 1 lesson, \$22 for 2 lessons, and \$32 for 3 lessons. (Lesson 4)

A. Graph the ordered pairs on the coordinate plane.



- B. Determine whether the cost is proportional to the number of lessons. Explain your reasoning.

Not proportional

9. **Equation Editor** Mrs. Jameson paid \$202.50 for a group of 9 students to visit an amusement park. (Lesson 5)

A. Write an equation relating the total cost y and the number of students x attending the park.

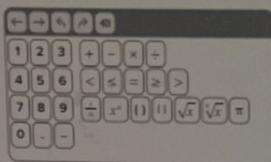
$$y = kx \quad k = \frac{y}{x} = \frac{202.5}{9} = 22.5$$

$$y = 22.5x$$

B. What would be the total cost if four more students wanted to join the group?

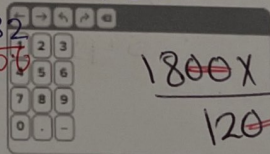
$$x = 9 + 4 = 13$$

$$y = 22.5x \quad 22.5 \times 13 = 292.5$$



10. **Equation Editor** A homeowner whose house was assessed at \$120,000 pays \$1,800 in taxes. At the same rate, what is the tax on a house assessed at \$135,000? (Lesson 6)

$$\begin{array}{r} \text{assessed} \\ 120,000 \\ 135,000 \end{array} \quad \begin{array}{r} \text{Taxes} \\ 1800 \\ ? \end{array}$$



$$318 \times 1350 \div 12 = 2025$$

إجابات المسائل
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