

WRITING EQUATIONS FOR PROPORTIONAL RELATIONSHIPS: WORD PROBLEMS

Write an equation for each proportional relationship by finding the constant of proportionality.

1. When Trayvon goes to the batting cages, he uses 2 tokens for every 10 pitches. There is a proportional relationship between the number of tokens Trayvon uses, x , and the number of pitches, y .

Equation: $y = 5x$

2. Devon's favorite applesauce recipe calls for 2 teaspoons of cinnamon for every 3 apples. There is a proportional relationship between the number of apples, x , and the amount of cinnamon, y .

Equation: $y = \frac{2}{3}x$

3. Alicia makes 40 ice cubes with 4 ice trays. There is a proportional relationship between the number of trays Alicia uses, x , and the total number of ice cubes she makes, y .

Equation: $y = 10x$

4. Xander pays \$8 for 10 skateboard stickers. There is a proportional relationship between the number of stickers Xander buys, x , and the total cost, y .

Equation: $y = \frac{8}{10}x$ or $y = 0.80x$

5. Brody is laying new tile flooring in his hallway. For every 2 feet in the hallway, he places 8 tiles. There is a proportional relationship between the length of the hallway Brody covers, x , and the number of tiles he needs, y .

Equation: $y = 4x$

6. Lia earns \$39 for 3 hours of babysitting. There is a proportional relationship between the number of hours Lia babysits, x , and the total amount of money she earns, y .

Equation: $y = 13x$

7. A cookie recipe makes 48 cookies using 4 cups of sugar. There is a proportional relationship between the number of cups of sugar, x , and the total number of cookies, y .

Equation: $y = 12x$

8. Landry is saving money for a new laptop. After 9 months, he has saved \$216. There is a proportional relationship between the number of months, x , and the total amount of money Landry has saved, y .

Equation: $y = 24x$

9. Dominic buys 10 boxes of raisins for \$5. There is a proportional relationship between the number of boxes of raisins he buys, x , and the total cost, y .

Equation: $y = \frac{1}{2}x$ or $y = 0.5x$

10. Nicolette pays \$35.94 for 6 months of a music streaming service. There is a proportional relationship between the number of months, x , and the total cost, y .

Equation: $y = 5.99x$