

Solve the proportion.

1. $\frac{5}{3x} = \frac{8}{15}$

2. $\frac{3}{7} = \frac{6}{x-7}$

Simplify.

3. $3 - 16 \div 8 * 2 + 72 \div (8 + 1)$

4. $\frac{20-8 \div 4}{4-2+7}$

Solve. Be sure to justify your steps.

5. $14x - 72 = 6x$

6. $\frac{6x-2}{4} + 21 = 25$

7. $3 = \frac{3x}{5} - 9$

8. Use dimensional analysis to convert 46 feet per second into miles per hour.

9. At the Quad Cities Marathon finish line, PV students hand out chocolate milk and water to finishers. There will be 5,000 20 oz. bottles of water, and 3,000 pints of chocolate milk. Which beverage is there more of?

10. Mrs. Pischke and her friends recently went to the movies. She was nice and bought them all candy and drinks. Her total bill was \$42.23 after buying 6 types of candy, 4 drinks, and paying \$2.73 in tax. Explain the meaning of each of the following as they apply to the **context** of the expression.

$$6c + 4d + 2.73 = 42.23$$

a. c : _____

b. $6c$: _____

c. d : _____

d. $6c+4d$: _____