

Simplify each

1. $12 \div (10 - 2^3)10$

2. $2 - (5 + 1) \div (9 - 2)$

3. $6 + 2((17 - 3^2) \div 4(3 + 2) + |9|)$

4. There are four quarts in every gallon. Write an equation for the number gallons in an unknown number of quarts.

5. Jason and Hussein both jog the same speed. Jason had jogged 2 miles before Hussein began. They both stop jogging at the same time. Write an equation for the number of miles Hussein jogged.

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Simplify each

1. $12 \div (10 - 2^3)10$

$$\begin{array}{l} (10 - 8) \\ 12 \div (2)10 \\ \downarrow \\ 6 \cdot 10 \\ = 60 \end{array}$$

3. $6 + 2((17 - 3^2) \div 4(3 + 2) + |9|)$

$$\begin{array}{l} 17 - 9 = 8 \\ 8 \div 4(5) = 2 \\ 2(5 + 2) = 14 \\ 10 + 9 = 19 \\ 6 + 2(19) = 38 \\ 6 + 38 = 44 \end{array}$$

2. $2 - (5 + 1) \div (9 - 2)$

$$\begin{array}{l} 2 - (6) \div (7) \\ 2 - \frac{6}{7} \end{array}$$

$$1 \frac{1}{7} = \frac{8}{7}$$

4. There are four quarts in every gallon. Write an equation for the number gallons in an unknown number of quarts.

$$G = \frac{Q}{4}$$

G = # gallons
Q = # QTS

5. Jason and Hussein both jog the same speed. Jason had jogged 2 miles before Hussein began. They both stop jogging at the same time. Write an equation for the number of miles Hussein jogged.

J = # miles Jason jogs
H = # miles Hussein jogs

$$H = J - 2$$

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