

Practice C

For use with the lesson "Rewrite Equations and Formulas"

Write the equation in function form.

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| 1. $16x - 4y = 28$ | 2. $38 - 11y = 44x + 5$ | 3. $12 = 6x - 3y$ |
| 4. $31 = 4y - 6x$ | 5. $8x - 6 - 6y = 18$ | 6. $16x - 22 + 4y = 0$ |
| 7. $5 - 3y = 14x + 5$ | 8. $2(3x - 4y) = 1$ | 9. $5(2y - 2x - 4) = 0$ |
| 10. $6x - \frac{1}{2}y = 7$ | 11. $\frac{2}{3}x - \frac{2}{9}y = -\frac{1}{3}$ | 12. $\frac{3}{4}y - \frac{1}{2}x + 5 = -7$ |

Solve the literal equation.

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| 13. Solve $Ax + By = C$ for y . | 14. Solve $A = P + Prt$ for t . |
| 15. Solve $f = \frac{1}{r_1} + \frac{1}{r_2}$ for r_1 . | 16. Solve $y - y_1 = m(x - x_1)$ for m . |

Solve the formula for the indicated variable. Then evaluate the rewritten formula for the given values.

17. Volume of a cone: $V = \frac{\pi r^2 h}{3}$. Solve for h . Find h when $V = 25.12 \text{ cm}^3$ and $r = 2 \text{ cm}$. Use 3.14 for π .
18. Surface area of a regular pyramid: $S = B + \frac{1}{2}P\ell$. Solve for ℓ . Find ℓ when $S = 68 \text{ in.}^2$, $B = 18 \text{ in.}^2$ and $P = 20 \text{ in.}$
19. **Markup** Solve for r in the formula $M = L + rL$ where M is the markup price, L is the list price, and r is the discount rate.
- An item with a list price of \$63.80 is marked up to \$121.80. Find the discount rate. Round your answer to the nearest whole percent.
 - An item with a list price of \$65 is marked up to \$146.25. Find the discount rate.
20. **Fundraiser** The history club is raising money so that they can go on a trip to the Smithsonian Institution in Washington, D.C. They need to raise \$1400. They plan on selling pizzas for \$6 each and sandwiches for \$4.50 each. An equation that models this situation is given by $6x + 4.5y = 1400$ where x is the number of pizzas sold and y is the number of sandwiches sold.
- One of the club members wants to figure out how many sandwiches need to be sold for different numbers of pizzas. Which variable should the club member solve for? Solve for the variable.
 - One of the club members wants to figure out how many pizzas need to be sold for different numbers of sandwiches. Which variable should the club member solve for? Solve for the variable.