

P.I. A.A.23: Solve literal equations for a given variable

1. Solve for h in $U = mgh$.

[A] $\frac{C}{5x^2}$

[B] $C - 5x^2$

[C] $\frac{5x^2}{C}$

[D] $5x^2 - C$

2. Solve for y in the equation $C = 5x^2 + y$.

3. Solve for d in the equation $R = 6c^2d$.

[A] $\frac{R}{6c^2}$

[B] $6c^2 - R$

[C] $\frac{6c^2}{R}$

[D] $R - 6c^2$

4. Which equation is $A = \frac{1}{2}h(b_1 + b_2)$ solved for h ?

[A] $h = \frac{2A}{b_1 + b_2}$

[B] $h = \frac{2A - b_1}{b_2}$

[C] $h = \frac{b_1 + b_2}{2A}$

[D] $h = \frac{2b_1 + 2b_2}{A}$

[E] $h = \frac{A}{2b_1 + 2b_2}$

5. An electrician needs to know that the relationship between amps, volts, and resistance is expressed in the formula $V = IR$ where V is volts, I is amps, and R is ohms. How large a resistance is needed to produce 8 amps from 184 volts?

[A] 230 ohms

[B] $\frac{1}{23}$ ohms

[C] 23 ohms

[D] 1472 ohms

6. Neil invested \$4000 for one year. At the end of that year he had \$4160 in his account.
- Transform the formula $I = prt$ to find a formula for rate.
 - Use the formula you found in part (a) to find the rate at which Neil invested his money.
7. a. Marti earned \$280 last week. Her hourly rate is \$7. The formula $w = hr$ gives the weekly wages for working h hours at a rate of r dollars an hour. Solve this formula for h .
- Use the formula you found in part (a) to find the number of hours Marti worked last week.
8. a. The formula $F = \frac{9}{5}C + 32$ gives the Fahrenheit temperature F in terms of the Celsius temperature C . Transform the formula to find the Celsius temperature in terms of the Fahrenheit temperature.
- Use a calculator to find the equivalent Celsius temperature for a Fahrenheit temperature of 60° . Round your answer to the nearest tenth.
9. a. Solve $3y + x = 2$ for y .
- Use a graphing calculator to graph the equation you found in part (a).
 - Use your graph and the TABLE feature of your calculator to find y when $x = 2$, $x = 5$, and $x = 6$.
10. The formula for finding the area of a square is $A = s^2$. Transform this formula to find a formula for the length of a side of a square with an area A .

[1] $h = \frac{U}{mg}$ _____

[2] B _____

[3] A _____

[4] A _____

[5] C _____

a. $r = \frac{I}{pt}$

[6] b. 4% _____

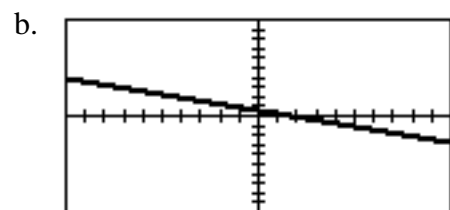
a. $h = \frac{w}{r}$

[7] b. 40 hours _____

a. $C = \frac{5}{9}(F - 32)$

[8] b. 15.6° _____

a. $y = \frac{2-x}{3}$



[9] c. $0, -1, -1\frac{1}{3}$ _____

[10] $s = \sqrt{A}$ _____