

NAME: \_\_\_\_\_

*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]  $5x^2 - C$

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

NAME: \_\_\_\_\_

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  $60^\circ$ . 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  $A$ .