

1. Solve for  $y$  in the equation  $C = 5x^2 + y$ . [A]  $\frac{C}{5x^2}$  [B]  $C - 5x^2$  [C]  $\frac{5x^2}{C}$  [D]  $5x^2 - C$

2. Solve for  $d$  in the equation  $R = 6c^2d$ . [A]  $\frac{R}{6c^2}$  [B]  $6c^2 - R$  [C]  $\frac{6c^2}{R}$  [D]  $R - 6c^2$

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

4. 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

5. Compare the quantities in Column A and Column B.

Column A

The value of  $A$  when the equation

$$y = \frac{4}{5}x - \frac{3}{4}$$

is written in  $Ax + By = C$  form.

Column B

The coefficient of  $x$  when

$$y = \frac{4}{5}x - \frac{3}{4}$$

is written in  $Ax + By = C$  form.

[A] The quantity in Column A is greater. [B] The quantity in Column B is greater.

[C] The quantities are equal.

[D] The relationship cannot be determined from the information given.

6. Which equation shows  $y = \frac{2x}{3} - 1$  in standard form?

[A]  $2x + 3y = -1$  [B]  $3x + 2y = -1$  [C]  $2x - 3y = 1$  [D]  $2x - 3y = 3$  [E]  $2x + 3y = -3$

7. Which equation is  $y = \frac{2}{3}x - 5$  written in  $Ax + By = C$  form?
- [A]  $2x + 3y = -5$     [B]  $6x + 3y = 15$     [C]  $2x + 3y = 15$     [D]  $2x - 3y = 15$     [E]  $6x - 3y = -15$
8. Solve for  $h$  in  $U = mgh$ .
9. 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.
10. 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.
11. 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.
12. 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  $x = 6$ .
13. 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  $A$ .

Algebra I Practice A.CED.A.4: Transforming Formulas

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[1] B

[2] A

[3] A

[4] C

[5] C

[6] D

[7] D

[8]  $h = \frac{U}{mg}$  \_\_\_\_\_

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

[9] b. 4% \_\_\_\_\_

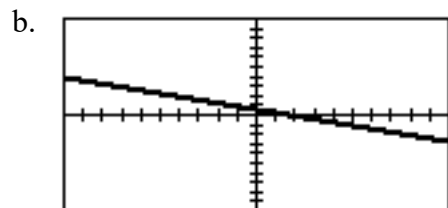
a.  $h = \frac{w}{r}$

[10] b. 40 hours \_\_\_\_\_

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

[11] b. 15.6° \_\_\_\_\_

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



[12] c. 0, -1,  $-1\frac{1}{3}$  \_\_\_\_\_

[13]  $s = \sqrt{A}$  \_\_\_\_\_