

Name: \_\_\_\_\_

Date: \_\_\_\_\_

## Rearranging Formulas Algebra (Grade 8)

In mathematics and science it is often necessary to rearrange a formula. By using our methods of solving equations we can move things around to get what we are looking for. In **Exercise #2** we will start with a popular one that is often used when writing the equation of a line. We will then work with other formulas.

**Exercise #1:** Review by solving each of the following equations for  $x$ :

(a)  $5x - 10 = 15$

(b)  $9 - 2x = 13$

(c)  $-3x - 3 = 3$

**Exercise #2:** Solve each of the following equations for  $y$ . The goal is to get the  $y$  alone.

(a)  $y - 2x = 3$

(b)  $2y - 4x = 8$

(c)  $3 - 4y = 12x$

**Exercise #3:** Solve each of the following equations for  $x$ . The goal is to get the  $x$  alone.

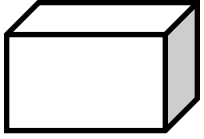
(a)  $x + b = c$

(b)  $ax + b = c$

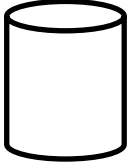
(c)  $y = mx + b$

**Exercise #4:** The perimeter of a rectangle is given by the formula  $2w + 2l = p$ . Solve for  $w$ .

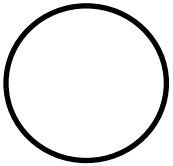
**Exercise #5:** The volume of a rectangular prism is given by the formula  $V = lwh$ . Solve for  $l$ .



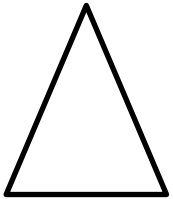
**Exercise #6:** The volume of a cylinder is given by the formula  $V = \pi r^2 h$ . Solve for  $h$ .



**Exercise #7:** The circumference of a circle is given by the equation  $C = 2\pi r$ . Solve for  $r$ .



**Exercise #6:** The area of a triangle is given by the formula  $A = \frac{bh}{2}$ . Solve for  $b$ .



**Exercise #8:** Solve the literal equation  $A = prt + p$  for  $t$ .