

How to Find the Variable

1. Combine like terms

- Terms are separated by + or -
- You can only combine terms with the same variables (letter)
- Write boxes around the same terms, including their operation (+ or -)

$$4m + 2 - m + 6 \quad \boxed{4m} + 2 \boxed{-m} + 6 \quad 3m \boxed{+2} \boxed{+6} = 3m + 8$$

- If the symbols are the same, find the sum = ADD
 $-6 - 2 = -8$ $7 + 5 = 12$
- If the symbols are different, find the difference) = SUBTRACT
 - Look at the largest integer's symbol (+ or -)

$$-5 + 3 = -2$$

- Keep the symbol of the largest integer

$$-7 - 2 = -9 \quad 8 - 4 = 4 \quad -11 + 9 = -2$$

2. Isolate the variable (move the other numbers to the other side)

Use the opposite operation (e.g. divide if it's being multiplied, subtract if added)

- Whatever you do to one side, do the SAME THING to the other side

$$\begin{array}{rcl} 6 & + & 3k = 18 \\ \underline{-6} & & \underline{-6} \\ & & 3k = 12 \end{array}$$

- Always start with constants (non variables)
- Remove coefficients (numbers attached to variable) by dividing

$$\begin{array}{rcl} 3k & = & 12 \\ \div 3 & & \div 3 \end{array}$$

$$k = 4$$