

Solving for x: Lesson 13

Literal Formulas: Notes

Name: _____

MATH 4 ALL

3 details to remember:

1. When we add or subtract to both sides of an equation, only do that once on both sides.

$$\begin{array}{r} 3a + 2 = 8b + 6a + 7 \\ -2 \quad | \quad -2 \\ \hline \end{array}$$

2. When we multiply or divide, you must do that only once but to each term on both sides. Use parentheses.

$$4. \frac{3a + 2}{4} = (8b + 6a + 7) \cdot 4$$

3. Only add like terms.

$$3 + a = \underline{3} + \underline{a}$$

Solve $x + 3 = y$ for x :

$$\begin{array}{r} x + 3 = y \\ -3 \quad -3 \\ \hline x = y - 3 \end{array}$$

Solve.

$$\frac{a}{4} = b \text{ for } a:$$

$$\begin{array}{l} * \frac{a}{4} = b \cdot 4 \\ a = 4b \end{array}$$

$$2j - 7 = k \text{ for } j:$$

$$\begin{array}{r} 2j - 7 = k \\ +7 \quad +7 \\ \hline 2j = k + 7 \\ \frac{2j}{2} = \frac{k+7}{2} \\ j = \frac{k+7}{2} \text{ or } \frac{k}{2} + \frac{7}{2} \end{array}$$

Solve.

$$c = \frac{de}{f} \text{ for } d:$$

$$f \cdot c = \frac{de}{f} \cdot f$$

$$\frac{fc}{e} = \frac{de}{e} \quad d = \frac{fc}{e}$$

$$7 = \cancel{h} + \frac{m}{b} \text{ for } b:$$

$$\frac{-h \quad \cancel{h}}{b \cdot (7-h) = \frac{m}{b} \cdot b$$

$$b \frac{\cancel{7-h}}{\cancel{7-h}} = \frac{m}{7-h}$$

$$b = \frac{m}{7-h}$$