

Do Now

Solve and Check:

$$1) 14 + 25n = 39$$

$$\begin{array}{r} -14 \\ \hline 25n = 25 \end{array}$$

$$2) 4 = \frac{x}{6} - 8$$

$$\begin{array}{r} +8 \\ \hline (\frac{6}{1})12 = \frac{x}{6}(\frac{6}{1}) \end{array}$$

$$72 = x$$

$$14 + 25n = 39$$

$$14 + 25(1) = 39$$

$$14 + 25 = 39$$

$$39 = 39 \checkmark$$

Check

$$4 = \frac{x}{6} - 8$$

$$4 = \frac{(72)}{6} - 8$$

$$4 = 12 - 8$$

$$4 = 4 \checkmark$$

Homework Answers

$$1) x = 4$$

$$2) m = -13$$

$$3) x = 100$$

$$4) x = -2$$

$$5) m = 27$$

$$6) g = 63$$

$$2) 20 = 7 - m$$

$$\begin{array}{r} -7 \\ \hline 13 = -m \end{array}$$

$$-13 = m$$

Multi Equations with Combine like Terms

Which of the following are "like terms"?

5n	12
-5n	-14
n ²	4n

Like Terms

- 1) Same variable
- 2) Same Exponent

Combine like terms, solve, and check:

1) $\underline{3x} - \underline{2x} = 12$

$1x = 12$

$x = 12$

Check

$3x - 2x = 12$

$3(12) - 2(12) = 12$

$36 - 24 = 12$

$12 = 12 \checkmark$

2) $\frac{n}{4} + \underline{7} - \underline{12} = 7$

$\frac{n}{4} - 5 = 7$

$(\cancel{4}) \frac{n}{\cancel{4}} = 12(\cancel{4})$

$n = 48$

Check

$\frac{n}{4} + 7 - 12 = 7$

$(\frac{48}{4}) + 7 - 12 = 7$

$12 + 7 - 12 = 7$

$7 = 7 \checkmark$

Combine like terms, solve, **and** check:

$$4) -x + 20 + 3x - 20 = 2$$

$$(-1) \quad -(1)$$

$$\cancel{2x} = 2$$

$$x = 1$$

Check

$$\begin{aligned} -x + 20 + 3x - 20 &= 2 \\ -(1) + 20 + 3(1) - 20 &= 2 \\ -1 + 20 + 3 - 20 &= 2 \\ 2 &= 2 \checkmark \end{aligned}$$

Combine like terms, solve, **and** check:

$$5) \frac{1}{2}x + \frac{1}{4}x - 12 = 0$$

$$\begin{aligned} \frac{1}{2}x + \frac{1}{4}x \\ \frac{2}{4}x + \frac{1}{4}x = \frac{3}{4}x \end{aligned}$$

$$\begin{array}{r} \frac{3}{4}x - 12 = 0 \\ +12 \quad | +12 \\ \hline (\frac{3}{4})x = 14 \cdot 2(\frac{4}{3}) \end{array}$$

$$x = 16$$

Check

$$\begin{aligned} \frac{1}{2}x + \frac{1}{4}x - 12 &= 0 \\ \frac{1}{2}(16) + \frac{1}{4}(16) - 12 &= 0 \\ 8 + 4 - 12 &= 0 \\ 0 &= 0 \checkmark \end{aligned}$$