

Solving Two-Step Equations (SOL 7.14)

Example 1 Solve $3x + 1 = 7$

CHECK

$$3x + 1 = 7$$

Locate the variable term.

$$3x + 1 = 7$$

$$3x + 1 = 7$$

Use INVERSE OPERATIONS to isolate the x term.

$$3(\underline{\quad}) + 1 \stackrel{?}{=} 7$$

$$\underline{-1} \quad \underline{-1}$$

In Reverse PEMDAS order

$$3x = \underline{\quad}$$

Simplify.

$$\underline{\quad} + 1 \stackrel{?}{=} 7$$

$$\frac{3x}{\square} = \frac{6}{\square}$$

To eliminate the coefficient
divide each side by ____.

$$\underline{\quad} = 7 \quad \checkmark$$

Simplify.

$$x = \underline{\quad}$$

Solve the two-step equation. Check your solution.

$\frac{r}{4} - 12 = -5$	$7k - 14 = 42$	$-12 = 24 + 4b$
$3g - 5 = 17$	$9 = 4a + 13$	$13 = 5m - 2$
$-5 + 7k = -19$	$-15 = 11 - 2t$	$13 = 11 - 4x$

$$10 = \frac{s}{2} + 7$$

$$6 + \frac{n}{5} = -4$$

$$4 - 3y = 31$$

$$15 - 2b = -9$$

$$-\frac{1}{3}y - 6 = -11$$

$$16 - \frac{r}{7} = 21$$

$$3(y + 5) = 21$$

$$7(p - 3) = 35$$

$$-48 = 6(v + 2)$$

$$\frac{x + 3}{2} = 5$$

$$\frac{a - 4}{3} = -7$$

$$\frac{k + 1}{-2} = -8$$

$$7 - 2y = -3$$

$$\frac{4 - x}{3} = -7$$

$$15 = -3(w - 2)$$

Two-Step Equations With Integers

Date _____ Period _____

Solve each equation.

1) $\frac{r}{10} + 4 = 5$

2) $\frac{n}{2} + 5 = 3$

3) $3p - 2 = -29$

4) $1 - r = -5$

5) $\frac{k - 10}{2} = -7$

6) $\frac{n - 5}{2} = 5$

7) $-9 + \frac{n}{4} = -7$

8) $\frac{9 + m}{3} = 2$

9) $\frac{-5 + x}{22} = -1$

10) $4n - 9 = -9$

11) $\frac{x + 9}{2} = 3$

12) $\frac{-12 + x}{11} = -3$

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

14) $-5 + \frac{n}{3} = 0$

$$15) \frac{p}{4} + 8 = 7$$

$$16) 9 + \frac{n}{4} = 15$$

$$17) 6 + \frac{x}{2} = 4$$

$$18) \frac{b + 11}{3} = -2$$

$$19) \frac{a - 10}{3} = -4$$

$$20) -12r + 4 = 100$$

$$21) \frac{m}{16} - 9 = -8$$

$$22) -7 + 4r = -15$$

$$23) \frac{m - 13}{2} = -8$$

$$24) -5x + 13 = -17$$

$$25) \frac{k + 10}{-2} = 5$$

$$26) \frac{p + 8}{-2} = 10$$

$$27) -14r - 19 = 303$$

$$28) \frac{x}{-4} - 5 = -8$$