

Name \_\_\_\_\_

# 1-19 odd  
# 23, 24 + 25

Steps:

### 6.8 Solving Equations in More Than One Step

MATHPOWER™ BONUS #27+28

- ① Expand any brackets using the distributive prop.
- ② Collect like terms
- ③ Isolate the variable
- ④ Perform a left and right side check.

When you solve equations, the object is to get the variable alone, or to isolate the variable, on one side of the equal sign. Sometimes this requires more than one step.

Solve  $3x + 5 = 14$ .

$$3x + 5 = 14$$

$$3x + 5 + (-5) = 14 + (-5) \quad \text{Add } -5 \text{ to both sides.}$$

$$3x + 5 - 5 = 14 - 5$$

$$3x = 9$$

$$\frac{3x}{3} = \frac{9}{3}$$

$$x = 3$$

Check: L.S. =  $3x + 5$   
 $= 3(3) + 5$   
 $= 9 + 5$   
 $= 14$   
 R.S. = 14

Divide both sides by 3.

The solution is  $x = 3$ .

\* Do on a separate sheet of paper please! \*

Solve and check.

①  $5x + 4 = 34$

2.  $6y + 3 = 45$

③  $8z - 7 = 57$

4.  $11t - 16 = 39$

⑤  $2m - 6 = 12 + 4$

6.  $3z + 4 = 22 - 3$

Solve and check.

⑦  $4x + 2 = 14$

8.  $7y - 6 = 8$

⑨  $2x - 9 = 5$

10.  $8n - 13 = 3$

⑪  $3t + 4 = 51 - 8$

12.  $2m - 15 = -21 + 8$

Solve and check.

⑬  $\frac{x}{5} + 3 = 7$

14.  $\frac{a}{5} + 6 = 11$

⑮  $\frac{t}{3} + 9 = 12$

16.  $\frac{w}{11} - 2 = 7$

Solve and check.

⑰  $2x - 3.6 = 4.4$

18.  $5y + 1.3 = 21.3$

⑲  $4y - 1.3 = 8.7$

20.  $3x + 2.1 = 11.7$

Solve and check.

21.  $4z + 12 = 7z - 9$

22.  $8y + 2y = 6y + 16$

⑳  $10n + 12 - 9 - 7n + 4n = 31$

㉑  $12 + 2t + 7t + 4t = 64$

Solve and check.

㉒  $3(x - 5) = 9$

26.  $9(n + 2) = n + 26$

27.  $3 + 6s = 4(s - 3) + 19$

28.  $4(d - 4) + 2 = 3(d + 1)$