Name: _____

Basic

Two-Step Equations

Balance both sides of the equation by using inverse operations to get the variable alone and find its value.

example:

$$8x + 3 = 35$$
$$-3 \quad -3$$
$$\frac{8x}{8} = \frac{32}{8}$$
$$x = 4$$

$$7 + \frac{y}{2} = 17$$
$$-7 \qquad -7$$
$$(2)\ \frac{y}{2} = 10\ (2)$$
$$y = 20$$

* *Be sure to make the same change to* ***both*** *sides of the equal sign.*

Solve each equation to find the value of the variable.

① $7a + 2 = 51$

② $\frac{k}{3} + 9 = 16$

③ $8z - 7 = 33$

④ $\frac{d}{6} - 3 = 7$

⑤ $39 - 6e = 3$

⑥ $\frac{c}{8} + 19 = 23$

Name: _____

Basic

Two-Step Equations

⑦ $5y - 13 = 52$

⑧ $\frac{m}{3} + 8 = 20$

⑨ $4d + 4 = 40$

⑩ $\frac{n}{4} + 38 = 49$

⑪ $7f - 8 = 13$

⑫ $9 - \frac{k}{6} = 7$

⑬ $3j + 9 = 51$

⑭ $\frac{w}{8} - 5 = 4$

⑮ $9v + 3 = 39$

ANSWER KEY

Basic

Two-Step Equations

1 $7a + 2 = 51$

$-2 \quad -2$

$\frac{7a}{7} = \frac{49}{7}$

$a = 7$

2 $\frac{k}{3} + 9 = 16$

$-9 \quad -9$

$(3)\frac{k}{3} = 7(3)$

$k = 21$

3 $8z - 7 = 33$

$+7 \quad +7$

$\frac{8z}{8} = \frac{40}{8}$

$z = 5$

4 $\frac{d}{6} - 3 = 7$

$+3 \quad +3$

$(6)\frac{d}{6} = 10(6)$

$d = 60$

5 $39 - 6e = 3$

$-39 \quad -39$

$\frac{-6e}{-6} = \frac{-36}{-6}$

$e = 6$

6 $\frac{c}{8} + 19 = 23$

$-19 \quad -19$

$(8)\frac{c}{8} = 4(8)$

$c = 32$

7 $5y - 13 = 52$

$+13 \quad +13$

$\frac{5y}{5} = \frac{65}{5}$

$y = 13$

8 $\frac{m}{3} + 8 = 20$

$-8 \quad -8$

$(3)\frac{m}{3} = 12(3)$

$m = 36$

9 $4d + 4 = 40$

$-4 \quad -4$

$\frac{4d}{4} = \frac{36}{4}$

$d = 9$

10 $\frac{n}{4} + 38 = 49$

$-38 \quad -38$

$(4)\frac{n}{4} = 11(4)$

$n = 44$

11 $7f - 8 = 13$

$+8 \quad +8$

$\frac{7f}{7} = \frac{21}{7}$

$f = 3$

12 $9 - \frac{k}{6} = 7$

$-9 \quad -9$

$(-6)-\frac{k}{6} = -2(-6)$

$k = 12$

13 $3j + 9 = 51$

$-9 \quad -9$

$\frac{3j}{3} = \frac{42}{3}$

$j = 14$

14 $\frac{w}{8} - 5 = 4$

$+5 \quad +5$

$(8)\frac{w}{8} = 9(8)$

$w = 72$

15 $9v + 3 = 39$

$-3 \quad -3$

$\frac{9v}{9} = \frac{36}{9}$

$v = 4$