Two-Step Equation Notes:

1. $6x + 8 = 50$

$-8 \quad -8$

$\dfrac{6x}{6} = \dfrac{42}{6}$

$\boxed{x = 7}$

2. $2n - 5 = 11$

$+5 \quad +5$

$\dfrac{2n}{2} = \dfrac{16}{2}$

$\boxed{n = 8}$

3. $13 = -4k + 9$

$-9 \qquad -9$

$\dfrac{4}{-4} = \dfrac{-4k}{-4}$

$\boxed{-1 = k}$

4. $7 - 3y = 34$

$-7 \qquad -7$

$\dfrac{-3y}{-3} = \dfrac{27}{-3}$

$\boxed{y = -9}$

5. $\dfrac{x}{2} - 7 = 9$

$+7 \quad +7$

$\dfrac{1x}{2} = 16$

$\div \dfrac{1}{2} \qquad \div \dfrac{1}{2}$

$\boxed{x = 32}$

6. $11 = \dfrac{c}{-5} + 8$

$-8 \qquad -8$

$3 = \dfrac{1c}{-5}$

$\div \dfrac{1}{-5} \qquad \div \dfrac{1}{-6}$

$\boxed{-15 = c}$

7. $\dfrac{3}{5}x + 22 = 28$

$-22 \quad -22$

$\dfrac{3}{5}x = 6$

$\div \dfrac{3}{5} \qquad \div \dfrac{3}{5}$

$\boxed{x = 10}$

8. $-\dfrac{1}{3}m + 1 = -1$

$-1 \quad -1$

$-\dfrac{1}{3}m = -2$

$\div -\dfrac{1}{3} \qquad \div -\dfrac{1}{3}$

$\boxed{m = 6}$

9. $10 + \dfrac{7}{4}p = -38$

$-10 \qquad +10$

$\dfrac{7}{4}p = -28$

$\div \dfrac{7}{4} \qquad \div \dfrac{7}{4}$

$\boxed{p = -16}$

10. $15 = 9 - \dfrac{1}{2}x$

$-9 \quad -9$

$6 = -\dfrac{1}{2}x$

$\div -\dfrac{1}{2} \qquad \div -\dfrac{1}{2}$

$\boxed{-12 = x}$

11. $\dfrac{x+11}{8} = -3$

Mult _(what's on top stays on top)_

$\boxed{x+11} = -24$

$-11 \quad -11$

$\boxed{x = -35}$

12. $\dfrac{n-5}{-2} = -7$

Mult _(what's on top stays on top)_

$n - 5 = 14$

$+5 \quad +5$

$\boxed{n = 19}$

13. $1 = \dfrac{a-13}{-6}$

Mult _(what's on top stays on top)_

$-6 = \boxed{a} - 13$

$+13 \qquad +13$

$\boxed{7 = a}$

14. $4 = \dfrac{w+8}{9}$

Mult

$36 = \boxed{w} + 8$

$-8 \quad -8$

$\boxed{28 = w}$

15. Is 26 a solution to the following equation:

$x = 26$

$\dfrac{1}{2}x + 6 = -7$

$\dfrac{1}{2}(26) + 6 \overset{?}{=} -7$

$13 + 6 \overset{?}{=} -7$

$19 \neq -7$

26 is not a solution

16. The difference of 34 and 9x is – 2. Write the equation and solve the equation.

$$34 - 9x = -2$$
$$-34 \qquad -34$$
$$-9x = -36$$
$$\overline{-9} \quad \overline{-9}$$
$$\boxed{X = 4}$$

17. The sum of 4x and – 8 is sixteen. Write the equation and solve the equation.

$$4x + {}^-8 = 16$$
$$4x - 8 = 16$$
$$+8 \quad +8$$
$$\frac{4X}{4} = \frac{24}{4} \qquad \boxed{X = 6}$$

18. 6x – 2x + 11 = - 5

combine like terms

$$\boxed{4x} + 11 = -5$$
$$-11 \quad -11$$
$$\frac{4x}{4} = \frac{-16}{4}$$
$$\boxed{X = -4}$$

19. – 12 = 5t – 7t + 6

$$-12 = \boxed{-2t} + 6$$
$$-6 \qquad -6$$
$$\frac{-18}{-2} = \frac{-2t}{-2}$$
$$\boxed{9 = t}$$

20. A rectangle's perimeter is 26 and it has a length of 2x + 1 & a width of x. Find the measure of the length and width.

means add up all sides

2x+1

$$\boxed{P = 26} \quad X$$

$$26 = 2x+1 + x + 2x+1 + x$$

combine like terms

$$\frac{26}{-2} = \boxed{6x} + \frac{2}{-2}$$
$$\frac{24}{6} = \frac{6x}{6}$$
$$4 = X$$

length: 2x+1 = 2(4) + 1 = 9
width: X = 4