

Key

Solving Absolute Value Equations and Inequalities

Date _____

Period _____

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Solve each equation.

1) $|-4 - 3m| = 13$

$\left\{-\frac{17}{3}, 3\right\}$

2) $|5 + 4x| = 25$ $\left\{5, -\frac{15}{2}\right\}$

3) $|4 - 4n| = 8$

$\{-1, 3\}$

4) $|-6r + 6| = 18$

$\{-2, 4\}$

5) $|3a - 5| = 13$

$\left\{6, -\frac{8}{3}\right\}$

6) $|6v - 4| = 14$ $\left\{3, -\frac{5}{3}\right\}$

7) $|2r + 1| = 5$

$\{2, -3\}$

8) $|3h + 5| = 13$

$\left\{\frac{8}{3}, -6\right\}$

9) $|-4b - 3| = 3$

$\left\{-\frac{3}{2}, 0\right\}$

10) $|4 + 3x| = 2$

$\left\{-\frac{2}{3}, -2\right\}$

11) $-1 + |5m - 3| = 27$ $\left\{\frac{31}{5}, -5\right\}$

12) $5|-3r + 1| = 20$

$\left\{-1, \frac{5}{3}\right\}$

Solve each inequality.

$$13) |x+4| \leq 7$$
$$-11 \leq x \leq 3$$

$$14) |v+2| \geq 2$$
$$v \geq 0 \text{ or } v \leq -4$$

$$15) |m+1| \geq 1$$
$$m \geq 0 \text{ or } m \leq -2$$

$$16) |v-4| \geq 6$$
$$v \geq 10 \text{ or } v \leq -2$$

$$17) |b-3| > 2$$
$$b > 5 \text{ or } b < 1$$

$$18) -|x+3| > -1$$
$$-4 < x < -2$$

$$19) -|n+5| \leq -2$$
$$2 \leq n \leq 7$$

$$20) |n-2| < 3$$
$$-1 < n < 5$$

$$21) |n+1| \leq 3$$
$$-4 \leq n \leq 2$$

$$22) |x-3| < 2$$
$$1 < x < 5$$