

## Intermediate Algebra Skill

### Solving Absolute Value Inequalities: Linear Expression; Less Than Equality

Solve the following Absolute Value Inequalities:

1)  $|x| < 8$

2)  $\left|\frac{x}{3}\right| < 5$

3)  $|m-10| < 12$

4)  $|4+x| < 14$

5)  $|6v| \leq 24$

6)  $|n+3| < 5$

7)  $|-2+m|-1 \leq 10$

8)  $\frac{|n-4|}{9} < 1$

9)  $\left|\frac{m}{6}\right|-1 \leq 0$

10)  $|b-9|-6 < 0$

11)  $|6x+7|+1 \leq 24$

12)  $-8+|6v+9| < 43$

13)  $3|-7n-6| < 102$

14)  $-6|2x+8|+1 < -95$

15)  $5-3|-4+3v| < -10$

## Answers to Solving Absolute Value Inequalities: Linear Expression; Less Than Equality

1)  $-8 < x < 8$

2)  $-15 < x < 15$

3)  $-2 < m < 22$

4)  $-18 < x < 10$

5)  $-4 \leq v \leq 4$

6)  $-8 < n < 2$

7)  $-9 \leq m \leq 13$

8)  $-5 < n < 13$

9)  $-6 \leq m \leq 6$

10)  $3 < b < 15$

11)  $-5 \leq x \leq \frac{8}{3}$

12)  $-10 < v < 7$

13)  $-\frac{40}{7} < n < 4$

14)  $x > 4$  or  $x < -12$

15)  $v > 3$  or  $v < -\frac{1}{3}$