NAME

Module 6 Solving Absolute Value Equations and Inequalities

Lesson 4 Solving Inequalities Using "Absolute Value is Greater Than"

Solve each inequality and graph the solution set.

1. $|b| \geq -3$ $\mathfrak{R}$

2. $|m| > 3.5$ $m > 3.5$ or $m < -3.5$

3. $|p - 1| \geq 4$ $p \geq 5$ or $p \leq -3$

4. $\left|\frac{3}{4}j\right| \geq \frac{3}{2}$ $j \geq 2$ or $j \leq -2$

5. $|k + -2| > 0$ $k \neq 2$

6. $|2d + 3| \geq 3$ $d \geq 0$ or $d \leq -3$

7. $\left|\frac{h}{2} + 5\right| > 1$ $h > -8$ or $h < -12$

8. $|2r - 1| \geq 6$ $r \geq 3.5$ or $r \leq -2.5$

9. $|2x + 4| \geq 4$ $x \geq 0$ or $x \leq -4$

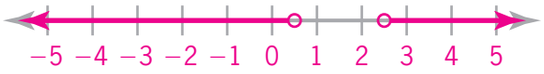
10. $4|h| > 14$ $h > 3\frac{1}{2}$ or $h < -3\frac{1}{2}$

11. $|z + 3| - 12 \geq -10$ $z \geq -1$ or $z \leq -5$

12. $\frac{|3g|}{9} \geq 0$ $\mathfrak{R}$

13. $5 + \left|\frac{y}{6} + 3\right| \geq 4$ $\mathfrak{R}$

14. $2|2s - 3| + 1 > 5$ **$s > 2.5$ or $s < 0.5$**



Match the graph to the correct inequality.

15.

A. $|2h| \leq 5$

B. $|2h| \geq -5$

C. $|5h| \leq -5$

(D.) $|2h| \geq 5$

16.

(A.) $|w| - 4 \geq -2$

B. $|w| - 4 \leq 2$

C. $|w - 4| \geq -2$

D. $|w| - 4 \leq 2$

17.

A. $|2m - 1| > 3$

B. $|m + 1| > 3$

(C.) $|m - 1| > 3$

D. $|2m - 1| > 3$

18.

$\mathfrak{R}$

A. $|9y| > 0$

B. $|9y| \leq 0$

(C.) $|9y| \geq 0$

D. $|9y| < 0$

19.

A. $|t - 1| \geq 3$

(B.) $|t - 1| \geq 4$

C. $|t - 3| \geq 1$

D. $|5t| \geq \frac{1}{3}$

20.

(A.) $|3r| - 9 > -3$

B. $|3r - 9| > -3$

C. $3r - 9 > |-3|$

D. $|3r| - 9 < -3$