Algebra I Worksheet #5 Unit 5 Selected Solutions

Solve each of the following equations. Show your steps neatly organized.

4. $|6x - 5| = 4$

$6x - 5 = 4$ or $6x - 5 = -4$

$+5 \quad +5 \qquad +5 \quad +5$

$\frac{6x}{6} = \frac{9}{6} \qquad \frac{6x}{6} = \frac{1}{6}$

$x = \frac{3}{2}$ or $x = \frac{1}{6}$

5. $|3x + 2| = 7$

$3x + 2 = 7$ or $3x + 2 = -7$

$-2 \quad -2 \qquad -2 \quad -2$

$\frac{3x}{3} = \frac{5}{3} \qquad \frac{3x}{3} = \frac{-9}{3}$

$x = \frac{5}{3}$ or $x = -3$

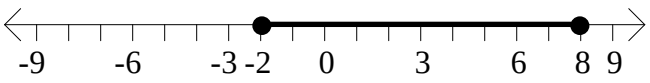
Solve for x. Graph the solution sets on the number lines provided. Show your process neatly organized.

8. $|x - 3| \leq 5$

$-5 \leq x - 3 \leq 5$

$+3 \quad +3 \quad +3$

$-2 \leq x \leq 8$

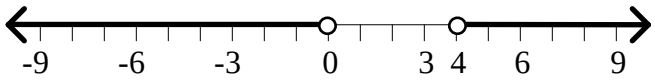


9. $|x - 2| > 2$

$x - 2 < -2$ or $x - 2 > 2$

$+2 \quad +2 \qquad +2 \quad +2$

$x < 0$ or $x > 4$



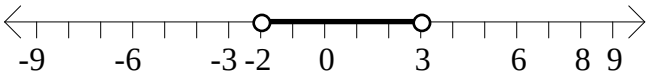
11. $|2x - 1| < 5$

$-5 < 2x - 1 < 5$

$+1 \quad +1 \quad +1$

$\frac{-4}{2} < \frac{2x}{2} < \frac{6}{2}$

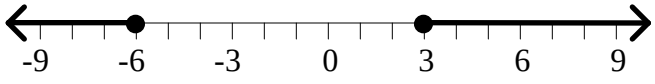
$-2 < x < 3$



16. $|2x + 3| \geq 9$

$2x + 3 \leq -9$ or $2x + 3 \geq 9$

$-3 \quad -3 \qquad -3 \quad -3$

$\frac{2x}{2} \leq \frac{-12}{2} \qquad \frac{2x}{2} \geq \frac{6}{2}$

$x \leq -6$ or $x \geq 3$