9/10/19

Warm-up

a) $|5| = 5$ b) $|-5| = 5$ c) $|x| = 5$

$x = 5$ or $x = -5$

Ex: $\frac{2|x-3|}{2} = \frac{14}{2}$ *Isolate Absolute value first

$|x-3| = 7$

$x-3=7$ or $x-3=-7$

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

$x = 10$ or $x = -4$

a) $\frac{4|x+5|}{4} = \frac{6}{4}$

$|x+5| = 1.5$

$x+5 = 1.5 \qquad x+5 = -1.5$

$-5 \quad -5 \qquad -5 \quad -5$

$x = -3.5$ or $x = -6.5$

b) $\left|\frac{x}{3}+2\right| = 6$

$\frac{x}{3}+2 = 6 \qquad \frac{x}{3}+2 = -6$

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

$3 \cdot \frac{x}{3} = 4 \cdot 3 \qquad 3 \cdot \frac{x}{3} = -8 \cdot 3$

$x = 12$ or $x = -24$

Ex2: $|x| \geq 7$

$x \geq 7$ or $x \leq -7$

a) $3|x| + 4 > 19$

$-4 \quad -4$

$\frac{3|x|}{3} > \frac{15}{3}$

$|x| > 5$

$x > 5$ or $x < -5$

b) $\left|\frac{x}{4}\right| \leq 1$

$4 \cdot \frac{x}{4} \leq 1 \cdot 4$ or $\frac{x}{4} \geq -1$

$x \leq 4$ or $x \geq -4$