

Name: ANSWER KEYScore: Solve this equation: $2|2x+1|+1 = 19$

$$2|2x+1| = 18$$

$$|2x+1| = 9$$

$$2x+1 = \pm 9$$

$$2x = -1 \pm 9$$

$$x = \frac{-1 \pm 9}{2} = \boxed{4, -5}$$

Check: $x = -5$

$$\begin{array}{r} 2|2(-5)+1|+1 \stackrel{?}{=} 19 \\ 2|-9|+1 \quad | 19 \\ 2 \cdot 9 + 1 \quad | 19 \\ 19 \quad | 19 \end{array}$$

 $x = -4$

$$\begin{array}{r} 2|2(-4)+1|+1 \stackrel{?}{=} 19 \\ 2|-7|+1 \quad | 19 \\ 2 \cdot 7 + 1 \quad | 19 \\ 14 + 1 \quad | 19 \\ 15 \quad | 19 \end{array}$$