

7. Solve the inequality $-8 \leq 8x - 9 \leq 8$

express your solution sets using interval notation.

$$\left(\frac{1}{8}, \frac{17}{8}\right)$$

$$\left(-\infty, \frac{1}{8}\right) \cup \left(\frac{17}{8}, +\infty\right)$$

$$\left[\frac{1}{8}, \frac{17}{8}\right]$$

$$\left(-\infty, \frac{1}{8}\right] \cup \left[\frac{17}{8}, +\infty\right)$$

Solution

Intervals

Solve:

$$|8x - 9| + 1 \leq 9$$

$$|8x - 9| \leq 8$$

$$-8 \leq 8x - 9 \leq 8$$

$$-8 - (-9) \leq 8x \leq 8 - (-9)$$

$$1 \leq 8x \leq 17$$

Divide each side by 8

$$|8x - 9| + 1 \leq 9$$

$$\frac{1}{8} \leq x \leq \frac{17}{8}$$