

Math 1513 - College Algebra

Quiz #3 - 2018.08.27

Solutions

Solve the following inequality, express your solution in the ' $n \in$ an interval' format.

$$|2n - 3| \geq 2$$

We break the problem into two pieces to get rid of the absolute values. We have

$$2n - 3 \geq 2 \text{ and } -2n + 3 \geq 2$$

Solving the first:

$$2n - 3 \geq 2 \longrightarrow 2n \geq 5 \longrightarrow n \geq \frac{5}{2}$$

Solving the second gives:

$$-2n + 3 \geq 2 \longrightarrow 1 \geq 2n \longrightarrow \frac{1}{2} \geq n$$

Putting these together in interval notation gives:

$$n \in \left(-\infty, \frac{1}{2}\right] \cup \left[\frac{5}{2}, \infty\right)$$