

This quiz is worth 10 points, and you have 10 minutes to complete it.

Calculators ARE allowed today.

1. (2 pts) The statement “If $a < b$ then $a + 1 \leq b$ ” is false. Write down a counterexample, and explain why it is a counterexample.

2. (2 pts) Write down the contrapositive of the statement: “If $a < b$ then $a \leq b + 1$.”

3. (2 pts) Use interval notation to fill in the blank:

$$|x - c| \geq \delta \text{ if and only if } x \in \underline{\hspace{2cm}} .$$

4. (4 pts) Fill in the blanks with inequalities (do *not* solve!).

$$(2x - 1)(x - 3) < 0 \text{ if and only if:}$$

$$\left(\underline{\hspace{2cm}} \text{ and } \underline{\hspace{2cm}} \right) \text{ OR } \left(\underline{\hspace{2cm}} \text{ and } \underline{\hspace{2cm}} \right)$$