

QUESTION

Determine the values of  $x$  satisfying  $x - 2 < 1 - x < 2x$ .

ANSWER

$$-2 + x < 1 - x < 2x$$

$$-2 + x < 1 - x \Rightarrow 2x < 3, x < \frac{3}{2}$$

$$1 - x < 2x \Rightarrow 3x > 1, x > \frac{1}{3}$$

so the solution is  $\frac{1}{3} < x < \frac{3}{2}$ .