

Name: ANSWER KEY _____ points

Solve the inequality. Express your answer in terms of (1) inequalities, (2) intervals or unions of intervals, and (3) graphs.

$$\frac{2x}{16-x^2} < 0$$

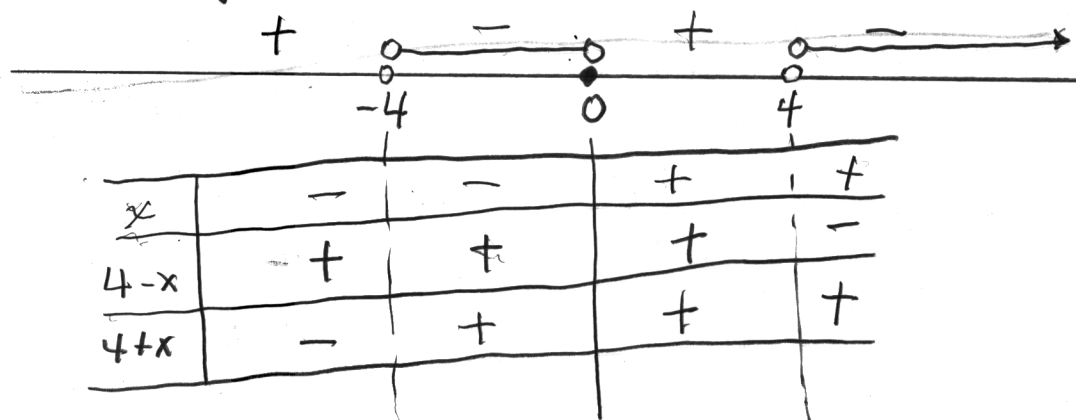
$$\frac{2x}{(4-x)(4+x)} < 0$$

zeros of numerator: 0

zeros of denominator: 4, -4

\therefore zero of fraction: 0

Vertical asymptotes: 4, -4



$$4-x > 0 \Leftrightarrow 4 > x$$

$$4+x > 0 \Leftrightarrow x > -4$$

$$(-4, 0) \cup (4, \infty)$$

$$-4 < x < 0 \text{ or } x > 4$$