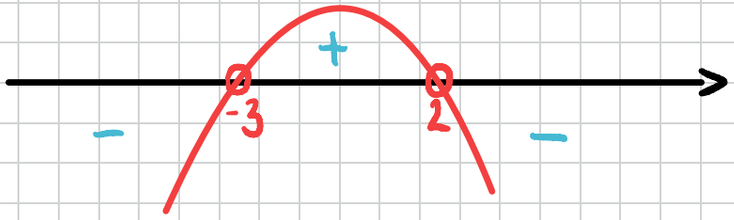
$$8 - x(x+2) > (x-2)(x+2)$$
$$8 - x^2 - 2x > x^2 - 4$$
$$-x^2 - x^2 - 2x + 8 + 4 > 0$$
$$-2x^2 - 2x + 12 > 0 \quad | : 2$$
$$-x^2 - x + 6 > 0$$
$$\Delta = (-1)^2 - 4 \cdot (-1) \cdot 6 = 1 + 24 = 25$$
$$\sqrt{\Delta} = 5$$
$$x_1 = \frac{1-5}{-2} \quad \vee \quad x_2 = \frac{1+5}{-2}$$
$$x_1 = \frac{-4}{-2} \qquad x_2 = \frac{6}{-2}$$
$$x_1 = 2 \qquad x_2 = -3$$



$$x \in (-3, 2)$$