

1. Solve the inequality $x^2 - 2x \geq 35$. Write your answer in interval notation.

2. Solve the inequality $-3 \leq 5 - 2x < 11$. Write your answer in interval notation.

3. Find all x satisfying $\frac{x+1}{x^2-16} \geq 0$. Write your answer in interval notation.

Furthermore, write the solutions for each of the following inequalities also.

$$\frac{x+1}{x^2-16} < 0,$$

$$\frac{x+1}{x^2-16} \leq 0,$$

$$\frac{x+1}{x^2-16} > 0$$