

Name: \_\_\_\_\_



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Solve the following inequalities:

a)  $x^2 + 4x + 3 < 0$

$$-3 < x < -1$$

f)  $x^2 + 3x - 28 > 0$

$$x < -7 \text{ or } x > 4$$

b)  $x^2 + 7x + 12 > 0$

$$x < -4 \text{ or } x > -3$$

g)  $x^2 - x - 42 > 0$

$$x < -6 \text{ or } x > 7$$

c)  $x^2 + 8x + 12 < 0$

$$-6 < x < -2$$

h)  $x^2 - 11x + 24 > 0$

$$x < 3 \text{ or } x > 8$$

d)  $x^2 + 14x + 24 \geq 0$

$$x \leq -12 \text{ or } x \geq -2$$

i)  $x^2 - 4x - 21 \leq 0$

$$-3 \leq x \leq 7$$

e)  $x^2 - 8x + 15 \leq 0$

$$3 \leq x \leq 5$$

j)  $x^2 + 6x - 27 > 0$

$$x < -9 \text{ or } x > 3$$

**Exam question:**Solve the following inequality  $x^2 + 7x < 18$ 

$$x^2 + 7x - 18 < 0$$

$$(x + 9)(x - 2) < 0$$

**Critical values:  $x = -9, x = 2$** 

$$-9 < x < 2$$

