

# POLYNOMIAL INEQUALITIES HWK

Name \_\_\_\_\_

Solve the following inequalities. Write your solutions in interval notation.

(1)  $x^2 + x - 20 > 0$

(4)  $-2x^3 - x^2 + 32x + 16 \leq 0$

(2)  $3x^2 + 7x - 6 > 0$

(5)  $2x^2 - 8 > 0$

(3)  $x^2 + x - 72 \leq 0$

(6)  $4x^2 - 9 < 0$

$$(7) -x^3 - 2x^2 - 9x - 18 \geq 0$$

$$(9) x^3 - 3x^2 - 4x + 12 > 0$$

$$(8) x^3 - 64x < 0$$

$$\text{*Bonus } (x-3)^2(x+4)(x+1) < 0$$