

Name _____
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Date _____
Pre Calculus

Solving Polynomial Inequalities

Solve each of the following for x and graph on a number line.

1. $x^3 + 4x^2 - 9x - 36 < 0$

2. $x^3 - 5x^2 - 4x - 20 \geq 0$

3. $x^4 - 10x^2 + 9 > 0$

4. $x^4 - 5x^2 + 4 \leq 0$

$$5. x^3 + 3x^2 > 16x + 48$$

$$6. x^3 + 7x^2 \geq 30x$$

$$7. x^4 - 20x^2 < 64$$

$$8. x^3 + 6x^2 - 25x \leq 150$$

$$9. 2x^3 - 4x^2 > 16x$$

$$10. x^4 \geq +125x^2 - 2500$$

$$11. x^3 - 6x^2 < 9x - 54$$

$$12. x^4 + 2x^3 - 16x^2 \leq 32x$$