

Name _____
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Date _____
Pre Calculus

Solving Quadratic Inequalities

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

1. $x^2 + 2x < 8$

2. $x^2 \geq 7x - 12$

3. $x^2 + 3x < 18$

4. $x^2 - 2x \geq 24$

5. $x^2 \leq 4x + 12$

6. $x^2 > 8x - 15$

7. $3x^2 + 2x \leq 8$

8. $4x^2 - 2x > 6x - 4$

9. $-2x^2 + 3x < -5$

10. $8x^2 \geq 16x + 10$

11. What is the solution of the inequality $x^2 + 6x < 16$?

- 1) $-2 < x < 8$ 3) $-8 < x < 2$
2) $x < -2$ or $x > 8$ 4) $x < -8$ or $x > 2$

12. What is the solution of the inequality $x^2 \geq 16$?

- 1) $x \geq 4$ 3) $-4 < x < 4$
2) $x < -2$ or $x > 8$ 4) $x < -4$ or $x > 4$

13. What is the solution of the inequality $x^2 - x - 6 < 0$?

- 1) $-3 < x < -2$ 3) $1 < x < 6$
2) $-2 < x < 3$ 4) $-3 < x < 2$