

Pre Calculus 11
HW 9.2 Quadratic Inequalities

Name _____

Date _____

1. Solve the inequality $x^2 \leq 0$

2. Solve the inequality $15 - 2y - y^2 \leq 0$

3. Solve the inequality $-4 + 5y - y^2 > 0$

4. Solve the inequality $21 - 4y - y^2 \geq 0$

5. Solve the inequality $24 + 5y - y^2 < 0$

6. Solve the inequality $8x^2 + 14x - 15 < 0$

7. Solve the inequality $6x^2 - 13x - 5 > 0$

8. Solve the inequality $20x - 4x^2 - 25 \geq 0$

9. Solve the inequality $25x^2 + 10x + 1 > 0$

10. Solve the inequality $-12x + 4x^2 + 9 < 0$

Solve.

11. $8 + h < 3h - [7 - (2 - h)]$

12. $c(c + 3) < c^2 + 4c + 6$

13. $a^2 + 11a - 15 \geq a(a - 3) + 2$

14. $4h(3h + 5) - 2 \leq 6h(2h + 3) + 1$

15. $5w(4w - 3) + 21 \geq 2w(10w + 1) - 13$

16. $3y(3y + 5) - 20 > 9y(y + 2) + 4$

17. For how many positive integer values of x is $x^{-1} > x$?

18. Find the smallest whole number value of x that satisfies this inequality.

$$5x - \frac{1}{3} > \frac{1}{5} + 3x$$

19. For what value(s) of r , a real number, is the following statement true?
 $3 - 2r(1 - r) > 6r - (2 - (7r + 2r^2))$

20. How many positive integers satisfy the inequality $(x - 1)(x - 4) < 0$?

Answer List

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|--|------------------------------|-------------------------------------|
| 1. $y \leq -5$ or $y \geq 3$ | 2. $y \leq -5$ or $y \geq 3$ | 3. $y > 1$ |
| 4. $-7 \leq y \leq 3$ | 5. $y < -3$ or $y > 8$ | 6. $-\frac{5}{2} < x < \frac{3}{4}$ |
| 7. $x < -\frac{1}{3}$ or $x > \frac{5}{2}$ | 8. $x = \frac{5}{2}$ | 9. all x except $-\frac{1}{5}$ |
| 10. no values of x | 11. $h > 13$ | 12. $c > -6$ |
| 13. $a \geq \frac{17}{14}$ | 14. $h \leq \frac{3}{2}$ | 15. $w \leq 2$ |
| 16. $y < -8$ | 17. none | 18. 1 |
| 19. $r < \frac{1}{3}$ | 20. 2 (integers) | |

Catalog List

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|----------------|---------------|---------------|
| 1. | 2. AW2 DE 17 | 3. AW2 DE 18 |
| 4. AW2 DE 19 | 5. AW2 DE 20 | 6. AW2 DE 21 |
| 7. AW2 DE 22 | 8. AW2 DE 25 | 9. AW2 DE 27 |
| 10. AW2 DE 28 | 11. ALG OB 65 | 12. ALG OB 94 |
| 13. ALG OB 95 | 14. ALG OB 98 | 15. ALG OB 99 |
| 16. ALG OB 100 | 17. MCC BD 29 | 18. MCC BD 17 |
| 19. MCC BD 15 | 20. MCC BD 11 | |