Algebra 2 CW/HW Name_____

Quadratic Formula

Date_____

1) The quadratic formula is:

2) You can use the quadratic formula only when:

Solve each equation with the quadratic formula.

3) $6r^2 - r - 12 = 0$

4) $3v^2 + 3v - 10 = 0$

5) $10r^2 + r + 6 = 0$

6) $8k^2 + 10k - 19 = 0$

7) $12n^2 + 10n + 5 = 0$

8) $7r^2 + 6r - 3 = 0$

9) $2r^2 + 3r + 1 = 0$

10) $5p^2 + 12p + 7 = 0$

11) $5x^2 - 24 = 7x$

12) $5n^2 + 3 = -8n$

13) $12n^2 + 10n = -11$

14) $r^2 = -8r - 1$

15) $7v^2 = 1 + 9v$

16) $4n^2 = 65 - 7n$

17) How do you know when you will get a real answer using the quadratic formula?

18) How do you know when you will get a complex answer using the quadratic formula?

Answers to Quadratic Formula

1) $x = \frac{-b + \sqrt{b^2 - 4ac}}{2a}$ OR $x = \frac{-b - \sqrt{b^2 - 4ac}}{2a}$

3) $\left\{\frac{3}{2}, -\frac{4}{3}\right\}$

5) $\left\{\frac{-1 + i\sqrt{239}}{20}, \frac{-1 - i\sqrt{239}}{20}\right\}$

7) $\left\{\frac{-5 + i\sqrt{35}}{12}, \frac{-5 - i\sqrt{35}}{12}\right\}$

9) $\left\{-\frac{1}{2}, -1\right\}$

11) $\left\{3, -\frac{8}{5}\right\}$

13) $\left\{\frac{-5 + i\sqrt{107}}{12}, \frac{-5 - i\sqrt{107}}{12}\right\}$

15) $\left\{\frac{9 + \sqrt{109}}{14}, \frac{9 - \sqrt{109}}{14}\right\}$

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