Algebra 2 Name_____ ID: 1

Solving Quadratics by taking the Square Root

Date_____ Period____

Solve each equation by taking square roots.

1) $x^2 - 4 = 45$

2) $-7x^2 = -189$

3) $n^2 - 1 = -11$

4) $9a^2 - 5 = -141$

5) $-7 - 10v^2 = -97$

6) $6n^2 + 2 = 164$

7) $-4 - 9x^2 = -652$

8) $8x^2 - 9 = 367$

9) $3a^2 + 9 = 2$

10) $3n^2 + 10 = 13$

11) $6n^2 - 1 = -19$

12) $9p^2 + 10 = 658$

13) $9r^2 - 3 = 6$

14) $9n^2 + 6 = -90$

15) $20n^2 + 1 = -91$

16) $13v^2 + 2 = 5202$

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Solve each equation by taking square roots.

1) $x^2 - 4 = 45$

$\{7, -7\}$

2) $-7x^2 = -189$

$\{3\sqrt{3}, -3\sqrt{3}\}$

3) $n^2 - 1 = -11$

$\{i\sqrt{10}, -i\sqrt{10}\}$

4) $9a^2 - 5 = -141$

$\left\{\frac{2i\sqrt{34}}{3}, -\frac{2i\sqrt{34}}{3}\right\}$

5) $-7 - 10v^2 = -97$

$\{3, -3\}$

6) $6n^2 + 2 = 164$

$\{3\sqrt{3}, -3\sqrt{3}\}$

7) $-4 - 9x^2 = -652$

$\{6\sqrt{2}, -6\sqrt{2}\}$

8) $8x^2 - 9 = 367$

$\{\sqrt{47}, -\sqrt{47}\}$

9) $3a^2 + 9 = 2$

$\left\{\frac{i\sqrt{21}}{3}, -\frac{i\sqrt{21}}{3}\right\}$

10) $3n^2 + 10 = 13$

$\{1, -1\}$

11) $6n^2 - 1 = -19$

$\{i\sqrt{3}, -i\sqrt{3}\}$

12) $9p^2 + 10 = 658$

$\{6\sqrt{2}, -6\sqrt{2}\}$

13) $9r^2 - 3 = 6$

$\{1, -1\}$

14) $9n^2 + 6 = -90$

$\left\{\frac{4i\sqrt{6}}{3}, -\frac{4i\sqrt{6}}{3}\right\}$

15) $20n^2 + 1 = -91$

$\left\{\frac{i\sqrt{115}}{5}, -\frac{i\sqrt{115}}{5}\right\}$

16) $13v^2 + 2 = 5202$

$\{20, -20\}$