Algebra 2   Name_____

Solving Quadratics - Square Roots: Imaginary Solutions Date_____ Period____
Solve each equation by taking square roots.

1) $-9 - 8x^2 = -209$

2) $7r^2 + 8 = 281$

3) $25m^2 - 8 = -7$

4) $2n^2 - 5 = -35$

5) $5x^2 - 3 = -8$

6) $10b^2 - 10 = -141$

7) $4n^2 + 1 = 157$

8) $8v^2 - 6 = -101$

9) $9x^2 + 8 = -35$

10) $9n^2 - 5 = -99$

11) $8 - 6m^2 = -88$

12) $3p^2 - 4 = -6$

-1-

13) $3r^2 - 5 = -10$

14) $8b^2 - 1 = -78$

15) $7x^2 + 5 = -137$

16) $8n^2 - 5 = -110$

17) $7v^2 + 6 = -117$

18) $4x^2 + 4 = -29$

19) $7k^2 + 7 = -140$

20) $10x^2 + 7 = -3$

21) $9a^2 + 3 = -27$

22) $-4 - 2p^2 = -40$

23) $7n^2 + 6 = -40$

24) $1 - 6x^2 = -15$

Algebra 2　　　　　　　　　　　　　　　Name_____

Solving Quadratics - Square Roots: Imaginary Solutions Date_____ Period_____

Solve each equation by taking square roots.

1) $-9 - 8x^2 = -209$

$\{5, -5\}$

2) $7r^2 + 8 = 281$

$\{6.245, -6.245\}$

3) $25m^2 - 8 = -7$

$\{0.2, -0.2\}$

4) $2n^2 - 5 = -35$

$\{i\sqrt{15}, -i\sqrt{15}\}$

5) $5x^2 - 3 = -8$

$\{i, -i\}$

6) $10b^2 - 10 = -141$

$\left\{ \dfrac{i\sqrt{1310}}{10}, -\dfrac{i\sqrt{1310}}{10} \right\}$

7) $4n^2 + 1 = 157$

$\{6.245, -6.245\}$

8) $8v^2 - 6 = -101$

$\left\{ \dfrac{i\sqrt{190}}{4}, -\dfrac{i\sqrt{190}}{4} \right\}$

9) $9x^2 + 8 = -35$

$\left\{ \dfrac{i\sqrt{43}}{3}, -\dfrac{i\sqrt{43}}{3} \right\}$

10) $9n^2 - 5 = -99$

$\left\{ \dfrac{i\sqrt{94}}{3}, -\dfrac{i\sqrt{94}}{3} \right\}$

11) $8 - 6m^2 = -88$

$\{4, -4\}$

12) $3p^2 - 4 = -6$

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

13) $3r^2 - 5 = -10$

$$\left\{ \frac{i\sqrt{15}}{3}, -\frac{i\sqrt{15}}{3} \right\}$$

14) $8b^2 - 1 = -78$

$$\left\{ \frac{i\sqrt{154}}{4}, -\frac{i\sqrt{154}}{4} \right\}$$

15) $7x^2 + 5 = -137$

$$\left\{ \frac{i\sqrt{994}}{7}, -\frac{i\sqrt{994}}{7} \right\}$$

16) $8n^2 - 5 = -110$

$$\left\{ \frac{i\sqrt{210}}{4}, -\frac{i\sqrt{210}}{4} \right\}$$

17) $7v^2 + 6 = -117$

$$\left\{ \frac{i\sqrt{861}}{7}, -\frac{i\sqrt{861}}{7} \right\}$$

18) $4x^2 + 4 = -29$

$$\left\{ \frac{i\sqrt{33}}{2}, -\frac{i\sqrt{33}}{2} \right\}$$

19) $7k^2 + 7 = -140$

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

20) $10x^2 + 7 = -3$

$$\left\{ i, -i \right\}$$

21) $9a^2 + 3 = -27$

$$\left\{ \frac{i\sqrt{30}}{3}, -\frac{i\sqrt{30}}{3} \right\}$$

22) $-4 - 2p^2 = -40$

$$\left\{ 4.243, -4.243 \right\}$$

23) $7n^2 + 6 = -40$

$$\left\{ \frac{i\sqrt{322}}{7}, -\frac{i\sqrt{322}}{7} \right\}$$

24) $1 - 6x^2 = -15$

$$\left\{ 1.633, -1.633 \right\}$$