Algebra 2 Name_____

Unit 1 Test 2 Review (Test Friday)

Date_____

Solve each equation by taking square roots.

1) $6b^2 = 456$

2) $n^2 + 3 = -18$

3) $11 + 25v^2 = 47$

4) $5n^2 + 1 = -11$

5) $5 + 16x^2 = 14$

6) $6v^2 - 9 = -51$

7) $6x^2 + 4 = -11$

8) $5m^2 + 7 = 267$

Find the discriminant of each quadratic equation then state the number and type of solutions.

9) $-5n^2 - 6 = n$

10) $6x^2 - 9x = -10 + 2x^2$

11) $-4x^2 - 6x - 13 = -10$

12) $-5p^2 - 5p + 6 = 6$

13) $2x^2 - 8x + 8 = 0$

14) $-7b^2 + 6b - 6 = 0$

15) $-6n^2 - 9n + 7 = 7$

16) $r^2 - 6r + 16 = 7$

Solve each equation with the quadratic formula.

17) $7r^2 + 3r - 12 = 0$

18) $2n^2 + n - 45 = 0$

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

20) $8v^2 + v + 9 = 6$

21) $8n^2 - 7n - 8 = -6$

22) $3p^2 - 4p - 3 = -8$

23) $8a^2 = 5a + 16$

24) $x^2 = 7x - 10$

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Solve each equation by taking square roots.

1) $6b^2 = 456$

$\{2\sqrt{19}, -2\sqrt{19}\}$

2) $n^2 + 3 = -18$

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

3) $11 + 25v^2 = 47$

$\left\{\frac{6}{5}, -\frac{6}{5}\right\}$

4) $5n^2 + 1 = -11$

$\left\{\frac{2i\sqrt{15}}{5}, -\frac{2i\sqrt{15}}{5}\right\}$

5) $5 + 16x^2 = 14$

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

6) $6v^2 - 9 = -51$

$\{i\sqrt{7}, -i\sqrt{7}\}$

7) $6x^2 + 4 = -11$

$\left\{\frac{i\sqrt{10}}{2}, -\frac{i\sqrt{10}}{2}\right\}$

8) $5m^2 + 7 = 267$

$\{2\sqrt{13}, -2\sqrt{13}\}$

Find the discriminant of each quadratic equation then state the number and type of solutions.

9) $-5n^2 - 6 = n$

−119; two imaginary solutions

10) $6x^2 - 9x = -10 + 2x^2$

−79; two imaginary solutions

11) $-4x^2 - 6x - 13 = -10$

−12; two imaginary solutions

12) $-5p^2 - 5p + 6 = 6$

25; two real solutions

13) $2x^2 - 8x + 8 = 0$

0; one real solution

14) $-7b^2 + 6b - 6 = 0$

−132; two imaginary solutions

15) $-6n^2 - 9n + 7 = 7$

81; two real solutions

16) $r^2 - 6r + 16 = 7$

0; one real solution

Solve each equation with the quadratic formula.

17) $7r^2 + 3r - 12 = 0$

$\left\{\frac{-3 + \sqrt{345}}{14}, \frac{-3 - \sqrt{345}}{14}\right\}$

18) $2n^2 + n - 45 = 0$

$\left\{\frac{9}{2}, -5\right\}$

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

$\{-2, -3\}$

20) $8v^2 + v + 9 = 6$

$\left\{\frac{-1 + i\sqrt{95}}{16}, \frac{-1 - i\sqrt{95}}{16}\right\}$

21) $8n^2 - 7n - 8 = -6$

$\left\{\frac{7 + \sqrt{113}}{16}, \frac{7 - \sqrt{113}}{16}\right\}$

22) $3p^2 - 4p - 3 = -8$

$\left\{\frac{2 + i\sqrt{11}}{3}, \frac{2 - i\sqrt{11}}{3}\right\}$

23) $8a^2 = 5a + 16$

$\left\{\frac{5 + \sqrt{537}}{16}, \frac{5 - \sqrt{537}}{16}\right\}$

24) $x^2 = 7x - 10$

$\{5, 2\}$