

Review Worksheet for Unit 3B Test

Name _____ Date _____

Factor

1) $3x^2 - 12x + x - 4$

2) $x^2 - 49$

3) $3x^2 + 6x + 3$

4) $3x^2 - x - 2$

5) $x^4 - 16$

6) $x^2 + 10x + 24$

Solve by factoring.

1) $x^2 - x - 20 = 0$

2) $6x^2 + 4x = 0$

3) $m^2 - 11m + 19 = -5$

4) $7x^2 - 14x = -7$

5) $4v^3 - 12v^2 - 5v + 15 = 0$

6) $6a^2 - 13a + 6 = 0$

Solve by taking square roots.

7) $2n^2 - 72 = 0$

8) $2r^2 - 32 = 0$

9) $h^2 = 121$

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

11) $k^2 + 8 = 8$

12) $13 - 8y^2 = -1139$

Solve by using the quadratic formula.

13) $k^2 + 5k - 6 = 0$

14) $3x^2 = 6x - 3$

15) $4n^2 + 4n - 8 = 1$

16) $2x^2 + 3x - 20 = 0$

Find the value of the discriminant and describe the nature of the roots.

17) $2x^2 - 8x + 8 = 0$

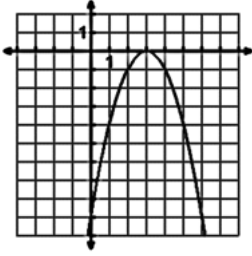
18) $x^2 - 5x = -10$

19) $3x^2 + x - 7 = 0$

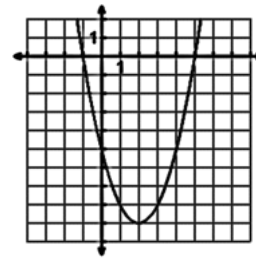
20) $x^2 + 6x + 4 = -2x^2$

Use the given information to determine the number and nature of the roots.

21)



22)



Solve by completing the square.

23) $x^2 + 20x + 75 = 0$

24) $x^2 - 14x - 32 = 0$

25) $x^2 - 8x = 30$

26) $x^2 + 6x + 9 = 100$
