Math 0482 Final Exam Review: Chapter 6

Sections 1-6

Solve.

1) $x^2 - 81 = 0$

2) $y^2 - \frac{1}{4} = 0$

3) $9x^2 - 8 = 0$

4) $5x^2 - 12 = 0$

5) $2y^2 - 7 = 0$

6) $3y^2 - 6 = 0$

7) $(2x - 3)^2 - 16 = 0$

8) $4(x - 1)^2 - 5 = 0$

9) $9(x - 3)^2 + 4 = 0$

10) $5(2x + 1)^2 + 1 = 0$

11) $2x^2 + 10 = 0$

12) $x^2 + 64 = 0$

Solve algebraically. Round to the nearest tenth of a foot.

13) A 20-foot ladder, leaning against a building, reaches a height of 19 feet. How far is the base of the ladder from the wall? Round to the nearest tenth of a foot.

Solve by completing the square.

14) $x^2 + 4x - 5 = 0$

15) $5x^2 - 10x + 1 = 0$

16) $3x^2 + 10x + 6 = 0$

17) $x(x + 9) + 10 = 5x + 2$

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Solve using the quadratic formula

18) $2x^2 - x - 6 = 0$

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

20) $2 + 4x - 3x^2 = 0$

21) $(x+2)^2 - 3x = 4$

Use the discriminant to determine the number and type of solutions.

22) $-x^2 + 6x + 1 = 0$

23) $-x^2 + x - 3 = 0$

24) $4x^2 - 4x + 1 = 0$

25) $16x^2 - 9 = 0$

26) $x^2 - 4x - 96 = 0$

27) $t^2 + 25 = 0$

28) $5y^2 - 25y = 0$

29) $(2x+5)^2 - 9 = 0$

30) $(x-2)(x-5) = 5$

Find a solution.

31) $f(x) = x^3 - 64$

32) $f(x) = x^4 + 8x$

Find a quadratic equation with integer coefficients and the given set of solutions.

33) {1. -2}