Algebra II Unit 1 Quiz 2 Study Guide

Factor Completely.

1) $2x^2 + 66x + 120$

2) $9x^2 + 75$

3) $2x^4y^2 - 4x^3y^3 + 8xy^4 - 12x^4y^5$

4) $(x+4)^2 - 81$

Solve.

5) $16x^2 = 25$

6) $x^2 + 6x + 8 = 0$

7) $3x^2 = -12$

8) $9x^2 - 54 = 0$

9) $2x^2 + 36 = 0$

10) $x^2 - 10 = 0$

11) $x^2 - 9x + 18 = 0$

12) $2x^2 - 3 = x$

13) $3x^2 + 12x = 0$

14) $3x^2 - 16x - 12 = 0$

15) $x^2 - 5x = 0$

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

17) $25x^2 - 15x = 0$

18) $4x^2 + 8 = 0$

19) $x^2 + 8x = -16$

20) $3x^2 - 7x + 2 = 0$

21) $5x^2 - 80 = 0$

22) $6x^2 + 7x - 3 = 0$

23) The length of a rectangle is 3ft less than the width. The area is 40ft². What is the width and the length of the rectangle?

24) The length of a picture is two less than five times the width. If the area is 39 cm², what is the length and width of the picture?