Algebra 2   Name_____ ID: 1

Unit 2 Test Review
                                                 Date_____ Period_____

Factor each completely.

1) $x^2 - 3x - 40$

2) $p^2 - 3p - 70$

3) $3m^2 + 23m + 14$

4) $5x^2 + 2x - 7$

5) $3p^2 + 2p - 21$

6) Solve by factoring:
   $4v^2 - 9 = 0$

7) Solve by factoring:
   $9r^2 - 25 = 0$

8) Solve by factoring:
   $16n^2 - 1 = 0$

Solve each equation by factoring.

9) $54x^2 - 108x = 0$

10) $18r^2 - 180r = 0$

11) $5v^2 + 2v - 16 = 0$

12) $5b^2 + 12b + 12 = 5$

13) $6n^2 + 2n - 28 = 0$

Factor each and find all roots.

14) $x^3 - 3x^2 - 4x = 0$

15) $x^3 + 2x^2 - 15x = 0$

16) $x^3 + 8x^2 + 15x = 0$

17) $x^4 - 81 = 0$

18) $x^4 - 100 = 0$

19) $x^4 - 25 = 0$

20) $x^4 - 64 = 0$

Solve each equation by factoring, and then ADD the solutions together.

21) What is the sum of the roots?

$6m^2 + m - 15 = 0$

22) $2k^2 + 3k = 0$

What is the sum of the roots?

Find the value that completes the square and then rewrite as a perfect square.

23) $r^2 + 8r +$ __

24) $x^2 - 28x +$ __

25) $x^2 + 42x +$ __

Solve each equation by completing the square.

26) $b^2 - 2b - 80 = 0$

27) $m^2 - 20m + 99 = 0$

28) $4x^2 - 16x - 84 = 0$

29) $5k^2 + 10k - 75 = 0$

30) $9n^2 - 18n - 20 = -4$

31) $4n^2 + 16n - 6 = 3$