

Assignment: Section 3-5

Date _____

Period _____

Solve by factoring out the greatest common factor.

1) $4x^2 - 40x = \bigcirc$

2) $6n^3 - 60n^2 = \bigcirc$

3) $x^3 - 9x^2 = \bigcirc$

4) $6r^2 + 30r = \bigcirc$

Solve by factoring the trinomial.

5) $r^2 - 2r - 63 = \bigcirc$

6) $p^2 + 6p + 5 = \bigcirc$

7) $b^2 - 3b - 18 = \bigcirc$

8) $b^2 + 7b - 30 = \bigcirc$

Solve by factoring the difference of squares.

9) $4n^2 - 9 = \bigcirc$

10) $9x^2 - 25 = \bigcirc$

11) $4p^2 - 1 = \bigcirc$

12) $16m^2 - 9 = \bigcirc$

Solve by factoring by grouping.

13) $18x^3 - 30x^2 - 15x + 25 = \bigcirc$

14) $2v^3 + v^2 + 16v + 8 = \bigcirc$

15) $7x^3 + 8x^2 - 56x - 64 = \bigcirc$

16) $56a^3 - 35a^2 + 64a - 40 = \bigcirc$

Solve each equation by taking square roots. You should have 2 answers, a positive and a negative.

17) $6r^2 = 354$

18) $m^2 - 8 = 73$

19) $7x^2 + 6 = 181$

20) $5n^2 + 10 = 255$

Solve each equation by completing the square.

21) $x^2 - 16x + 63 = 0$

22) $n^2 + 20n - 44 = 0$

23) $v^2 - 10v - 77 = 4$

24) $b^2 + 12b - 91 = -2$

Find the discriminant of each quadratic equation then state the number and type of solutions. $d = b^2 - 4ac$

25) $10x^2 + 6x - 4 = 0$

26) $-k^2 + 2k - 1 = 0$

27) $-9v^2 + 6v - 1 = 0$

28) $2m^2 + 6m + 7 = 0$

Solve each equation with the quadratic formula.

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

29) $5n^2 + 11n - 124 = 0$

30) $4x^2 - x - 18 = 0$

31) $4r^2 + 4r - 18 = 0$

32) $3x^2 + 5x - 78 = 0$