

Section 8.4: Zero product property, GCF**Solve each equation by using the zero product property.**

1) $(n - 5)(n + 3) = 0$

2) $(x - 3)(x + 1) = 0$

3) $(a + 3)(a + 8) = 0$

4) $m(m + 7) = 0$

5) $(3x - 8)(x - 3) = 0$

6) $(3p + 1)(8p - 3) = 0$

7) $(a - 7)(a - 3) = 0$

8) $(4v + 5)(v + 7) = 0$

9) $3p(5p - 1) = 0$

10) $(v + 8)^2 = 0$

Factor the common factor out of each expression.

11) $16r^4 - 28r$

12) $-63p + 56$

13) $50r + 10$

14) $-20x^2 - 24x$

$$15) -30m^3 + 18$$

$$16) 7r^8 - 21r^3$$

$$17) 3x^3y - 6x^2y$$

$$18) 10a^2b^2 + 20a^3$$

$$19) -6a^2 + 60a + 6$$

$$20) 35a^6 + 50a^4 - 30a^3$$

Solve each equation by factoring.

$$21) 3v^2 + 18v = 0$$

$$22) 7r^2 - 14r = 0$$

$$23) 2r^2 - 10r = 0$$

$$24) 7n^2 + 49n = 0$$

$$25) 3a^2 = -3a$$

$$26) 4v^2 = 8v$$

$$27) 5n^2 = -20n$$

$$28) 4x^2 = 24x$$