

12.3.D1 ~ Factoring Polynomials

Past due on _____ Period _____

Factor out the greatest common factor (GCF) from the expression. (If necessary, refer to the 11.4 example "Factoring the GCF from an Algebraic Expression" in the Chapter 11 Summary.)

1) $-48x^2 + 42$

2) $36x^3 - 9x^2 - 63x$

3) $4a^2 - 24a + 40a^4$

4) $-16x^4 - 10x^3 - 14x^2 - 18x$

Factor each trinomial completely. (If necessary, refer to 12.3 example, "Factoring Trinomials" in the Chapter 12 Summary.)

5) $p^2 - 3p - 40$

6) $p^2 + 14p + 48$

7) $x^2 + 9x + 18$

8) $b^2 - 8b + 12$

9) $x^2 - 4x - 21$

10) $x^2 + 2x - 15$

11) $v^2 + 2v - 8$

12) $a^2 - 4a - 45$

Write each polynomial in standard form. Classify the polynomial by its number of terms - monomial, binomial, or trinomial. State the degree of the polynomial. (If necessary, refer to the 12.1 example "Identifying Characteristics of Polynomial Expressions" in the Chapter 12 Summary.)

13) $2v^3 - 5v^4$

14) $10x^3$

15) $-6k + 10 + 5k^2$

16) $-4 + 9x$