Module 1 – Special Products and Factoring

Lesson 2 – Factoring

Homework 2

Name _____

Find all solutions for each section. Show all work.

Factor the following by getting the greatest common factor (GCF).

1. $3a(b+1)-6(b+1)$

2. $c(n-4)+d(n-4)$

3. $m(n+5)-4(n+5)$

4. $12abc^2-24abc-180ab$

5. $ar^2+16ar-36a$

Factor the following difference of two squares.

1. $(x+y)^2-36$

2. $16x^2-9y^2$

3. $(x+2y)^2-z^2$

4. $(a+b)^2-(c+d)^2$

5. $9-(m+11)^2$

Factor the following perfect square trinomial

1. y^4+18^2+81

2. $1-20a+100a^2$

3. $25a^2+20a+4$

4. $16n^2+40n+25$

5. $9x^2+12xy+4y^2$

Factor each quadratic trinomial. Check your answer by getting the product of the factors.

1. $8a^2-a-7$

2. x^2-5x-6

3. r^2-6r+8

4. y^2+2y-8

5. $x^2+5x-14$

Factor the following cube of a binomial

1. $27f^3g^3-64h^3j^3$

2. $27g^3+n^3$

3. c^3-64

4. $1000p^6q^6-27r^3t^3$

5. b^3+27

Factor the following polynomials completely

1. $3ab^2-27a^3$

2. $8x^4+14x^2-4$

3. $6x^2+18xy+12y^2$

4. a^4-2a^2+1

5. $x^2(m+n)-16(m+n)$