Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period: \_\_\_\_\_\_\_\_\_\_

**HW 8-1 Factoring by GCF and Grouping**

Factoring by Taking out a Greatest Common Factor (GCF)

1. 6x + 3y \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. 8x2 – 4x \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. 12a2b + 6a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. 15x2 + 10x3y \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
5. 16x + 4y \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
6. 12xy + 12x2 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
7. 5a2b + 10ab \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
8. 27a2b + 9b3\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
9. 3c2d – 6c2d2\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
10. 24x2 +12y2\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Factor by grouping

 1) x2 + 3x + 2x + 6 2) x2 +5x + 4x + 20

 3) x2 + 3x – 5x – 15 4) x2 + 2x + 5x + 10

 5) 2x3 –x2 – 10x + 5 6) x3 + 10x2 + 5x + 50

 7) x3 + 4x + x2 + 4 8) 2x3 + x2 + 8x + 4

1. 15x3 + 5x2 + 3x + 1 10) 20n3 + 12n2 + 25n + 15

11) 9p3 + 3p2 + 15p + 5 12) 6x3 + 10x2 + 3x + 5

13) 4n3 – 12n2 + 3n -9 14) 2m3 – m2 + 4m – 2

15) 20xy + 12x + 15y + 9 16) 6aw – 36 ak + 6b2w – 36b2k

**HW 8-2 Factoring Trinomials a =1**

 1. x2 + 8x + 15 2. x2 + 8x + 12

3. y2 – 11y +30 4. y2 + y – 30

5. y2 + 11y +30 6. y2 – y – 30

7. x2 + 8x + 16 8. 16 – 8x + x2

9. x2 + 16x + 64 10. y2 – 22y + 121

11. x2 + 10x + 24 12. x2 + 6x -72

13. x2 – 4x – 21 14. x2 + 3x - 40

**HW 8-3-Factoring GCF and Trinomials with a coeficient**

1. $4x^{2}+52x+168$ 6. $5a^{2}+60a+100$
2. $5n^{2}-45n+40$ 7. $6a^{2}+24a-192$
3. $4x^{2}+12x+8$ 8. $3n^{2}+12n-15$
4. $2x^{2}+32x+126$ 9. $8m^{2}+48m-144$
5. $7x^{2}+28x-84$ 10. $3m^{2}-18m-81$

**All Trinomials**

Factor completely. If it can’t be factored write prime.

|  |  |
| --- | --- |
| 1.  | 2.  |
| 3.  | 4.  |
| 5.  | 6.  |
| 7.  | 8.  |
| 9.  | 10.  |
| 11.  | 12. |
| 13.  | 14.  |
| 15.  | 16.  |
| 17.  | 18.  |
| 19.  | 20.  |

**Factoring all Trinomials Review**

* 1. x2 – x – 20
	2. x2 + x – 20
	3. x2 + 9x + 20
	4. x2 – 9x + 20
	5. x2 + 7x + 12
	6. x2 – 10x + 16
	7. x2 + 8x – 9
	8. 
	9. 
	10. 
	11. 
	12. 2y2 – 16y + 30
	13. 2a2 – 24a + 70
	14. 
	15. 
	16. 
	17. 
	18. 4x2 + 40x + 100

**HW Difference of Square**

1. x2 – 9 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2) x2 – 49 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3) 4x2 – 9y2\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

4) 1 – 9y2 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

5) 16a2 – 9b2\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

6) m2 – 4 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

7) 4p2 – 25 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

8) m2 – 16 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

9) 49q2 – 81\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

10) w2 – y2 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

11) 169 – x2 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

12) 16x2 – 25 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Trinomials:

1. c2 + 14c + 40 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. m2 – 7m – 30 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. 32 + 12n + n2 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. 44 – 15s + s2 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
5. 2x2 – 22x + 56\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_