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. 6.
2. 7.
3. 8.
4. 9.
5. 10.

**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\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_