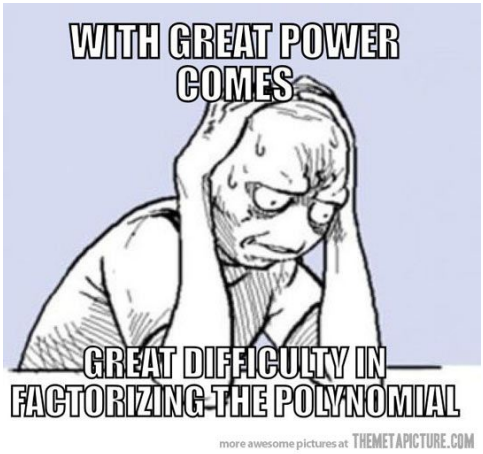
Name _____

FOM 3 Unit 3: Factoring



Monday	Tuesday	Wednesday	Thursday	Friday
October 1 ● Factor using GCF ● Factor difference of two squares HW: worksheet 3.1	**October 2** ● Factor trinomials HW: worksheet 3.2	**October 3** ● Factor trinomials HW: worksheet 3.3	**October 4** ● QUIZ!! ● Mixed practice factoring HW: worksheet 3.4	**October 5** ● Zeroes and multiplicity from factors HW: worksheet 3.5
October 8 ● Review for test HW: finish review	**October 9** ● TEST!!			

3.1 - Factor Using the Greatest Common Factor

Factor each polynomial completely.

1. $45x^2 - 25x$

2. $-27x^2y^5 - 72x^3y^2$

3. $30b^9 + 5ab - 15a^2$

4. $9m^2 - 900$

5. $-10x^4 + 20y^2 + 12x$

6. $6x^2 - 2x$

7. $8x^3y^2 + 4x^3$

8. $30qpr - 5qp + 50q$

9. $-3x^3 + 27x$

10. $-24x^6 - 4x^4 + 12x^3 + 8x^2$

3.2 - Factor Trinomials

Factor each polynomial completely.

1. $x^2 - x - 56$

2. $2n^2 + 5n + 2$

3. $n^2 - 10n + 9$

4. $16b^2 - 40b + 25$

5. $m^2 + 2m - 24$

6. $2w^2 + 3w - 9$

7. $3p^2 - 8p + 4$

8. $3x^2 - 2x - 5$

3.3 - More Factor Trinomials

Factor each polynomial completely.

1. $10x^2 + 17x + 3$

2. $p^2 - 11p + 28$

3. $3x^2 + x - 14$

4. $4x^2 + 14x - 30$

5. $k^2 - 13k + 40$

6. $7x^2 + 16x - 15$

7. $6x^3 + 53x^2 - 9x$

8. $7a^2 + 53a + 28$

3.4 - Mixed Factoring Practice

Factor each polynomial completely.

1. $5x^2 - 25x$

2. $z^2 + 9z + 8$

3. $7x^3 + 14x^2 + 7x$

4. $9d^2 - 4$

5. $5x^2 - 32x - 21$

6. $p^2 + 5p - 36$

7. $2w^2 + 20w + 48$

8. $-3x^5 - 6x^3 + 18x$

9. $6x + 21$

10. $4m^2 - 16$

11. $4x^2 + 20x + 9$

12. $16g^3h + 10g^2h - 4g$

3.5 - Zeroes From Factors

Write the polynomials in factored form using the given zeroes and multiplicities.

1. $x = 4$ mult: 1, $x = -3$ mult: 2

2. $x = 2$ mult: 5, $x = 3$ mult: 1, $x = 0$ mult: 9

3. $x = 7$ mult: 1, $x = 2$ mult: 1, $x = 5$ mult: 1

4. $x = -1$ mult: 6, $x = 10$ mult: 2

5. $x = 0$ mult: 2, $x = -14$ mult: 4

6. $x = -8$ mult: 4, $x = -6$ mult: 3

7. $x = 11$ mult: 133

8. $x = 138$ mult: 3, $x = -1845$ mult: 5

For each polynomial, determine the zeroes and their multiplicities.

9. $f(x) = 5(x-6)^2(x+1)(x-4)$

10. $f(x) = x^{15}(x-4)^{20}$

11. $f(x) = -7(x+3)(x-2)$

12. $f(x) = -4x^2(2x+3)^4(x-10)$