

NAME \_\_\_\_\_

# FOM 3

## Unit 3: Factoring and Statistics



more awesome pictures at [THEMETAPICTURE.COM](http://THEMETAPICTURE.COM)

<b>Date</b>	<b>Topic</b>	<b>Homework</b>
September 27	<ul style="list-style-type: none"> <li>• Factor using GCF</li> </ul>	worksheet 3.1
September 28	<ul style="list-style-type: none"> <li>• Factor 4 terms by grouping</li> <li>• Factor difference of squares</li> </ul>	worksheet 3.2
September 29	<ul style="list-style-type: none"> <li>• FOM 3 Pre-Assessment</li> <li>• Practice factoring</li> </ul>	worksheet 3.3
October 2	<ul style="list-style-type: none"> <li>• Factor Trinomials</li> </ul>	worksheet 3.4
October 3	<ul style="list-style-type: none"> <li>• Factor sum and difference of cubes</li> </ul>	worksheet 3.5
October 4	<ul style="list-style-type: none"> <li>• Quiz!!</li> <li>• Practice factoring</li> </ul>	worksheet 3.6
October 5	<ul style="list-style-type: none"> <li>• Observational study vs experiment</li> </ul>	worksheet 3.7
October 6	<ul style="list-style-type: none"> <li>• Sampling techniques</li> </ul>	worksheet 3.8
October 9	<ul style="list-style-type: none"> <li>• Review for test</li> </ul>	Factoring and Statistics Review
October 10	<ul style="list-style-type: none"> <li>• Test!!</li> </ul>	

### **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.  $30qpr - 5qp + 50q$

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

6.  $x - 5$

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

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

9.  $-48a^2b^2 - 56a^3b - 56a^5b$

10.  $50x - 80y$

### **3.2 - Factor By Grouping**

*Factor each polynomial completely.*

1.  $12a^3 - 9a^2 + 4a - 3$

2.  $35xy - 5x - 56y + 8$

3.  $3n^3 - 4n^2 + 9n - 12$

4.  $9xz - 15z - 21xu + 35u$

5.  $5n^3 - 10n^2 + 3n - 6$

6.  $2x^4 + 8x^3 - 10x^2 - 40x$

7.  $7x^5 + 4x^4 - 35x - 20$

8.  $2x^3 + 3x^2 - 32x - 48$

### **3.3 - Practice Factoring**

*Factor each polynomial completely.*

1.  $33a^8b^2 + 11a^6b^2 + 55a^4b^3$

2.  $7x^3 + 21x^2 + x + 3$

3.  $-2x^2 + 32$

4.  $-6g^7 + 7g^4 - 3g^2$

5.  $10yp - 15p - 4yt + 6t$

6.  $k^2 - 100$

7.  $40c^9d^6 + 50c^5d^7 + 30c^2d^4$

8.  $50p^2 - 20$

9.  $81w^2 - 121$

10.  $4x^9 + 5x^8 - 24x - 30$

### **3.4 - 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.  $3x^2 - 2x - 5$

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

10.  $7a^2 + 53a + 28$

### **3.5 - Factor Sum/Difference of Cubes**

*Factor each polynomial completely.*

1.  $g^3 + 216$

2.  $64m^3 - 1$

3.  $a^3 + 27$

4.  $-2k^3 + 16$

5.  $h^2 - 49$

6.  $5p^3 - 320$

### **Mixed Factoring**

7.  $6a^2 + 13a - 28$

8.  $r^2 - 81$

9.  $2d^3 + 3d^2 - 8d - 12$

10.  $12x^2 - 30x - 72$

11.  $7x^4 + 21x^2$

12.  $x^2 - 2x - 15$

### **3.6 - Mixed Factoring Practice**

*Factor each polynomial completely.*

1.  $5x^2 - 25x$

2.  $x^3 + 64$

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

4.  $9x^2 - 4$

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

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

7.  $18x^3 - 2x^2 + 27x - 3$

8.  $4x^2 + 20x + 9$

9.  $2x^3 + 7x^2 - 8x - 28$

10.  $6x + 21$

11.  $2x^2 + 20x + 48$

12.  $32x^3 - 4$

**3.7 - Even More Practice Factoring**

*Factor each polynomial completely.*



1.  $x^2 + x - 42$

2.  $2x^2 + 5x + 3$

3.  $2x^3 + 6x^2 + x + 3$

4.  $16x^2 - 81$

5.  $2x^3 - 10x^2 - 72x$

6.  $x^3 + 4x^2 - 3x - 12$

7.  $8x^3 + 125$

8.  $6x^2 + 71x - 12$

9.  $5x^6 - 5x^2$

10.  $24x^2 - 76x + 40$

**3.8 - Even EVEN More Practice Factoring**

*Factor each polynomial completely.*

1.  $-27x^5y^3 + 9x^4y^4 - 15x^2y^2$

2.  $200x^3 - 50x$

3.  $3x^2 - 11x - 20$

4.  $8d^3 + 216$

5.  $5x^7 + 8x^6 - 35x - 56$

6.  $9b^2 + 30b + 25$

7.  $2k^2 + 4k - 30$

8.  $25v^2 - 144$

9.  $10x^3 - 20x^2 - 2x + 4$

10.  $20h^7 + 9h^4 - 2h$