Math 1 **8.7 Factoring Special Cases** Unit 7

Difference of Squares: $x^{2}-y^{2}=\left(x-y\right)(x+y)$ or $x^{2}+0xy-y^{2}$

1. 
2. 
3. 
4. 
5. 
6. 

Mixed Review: Factor out a GCF, and then apply a factor rule

1. 24g2 – 6
2. 12t2 – 48
3. 12x2 + 12x + 3
4. 5x2 + 13x + 30
5. 100x2 – 81y2
6. 2x2 + 12x + 10
7. x2 – 12x + 36
8. 4x2 + 20x + 25
9. 4x2 + 24x + 36
10. x2 – 14x + 49
11. 16m2 – 72m + 81
12. 81r2 – 90r + 25

AREA – FACTORING APPLICATION

1. The area of a rectangle is g2 + 3g – 10, find the dimensions of the rectangle.
2. The area of a square is m2 + 10m + 25. Find the length of each side.
3. Find the perimeter of the square in question #2.
4. The volume of a rectangular prism is 8m3 – 128m. Find the length of all three sides. How many sides are binomials?
5. The area of a rectangle is 10w2 – 19w – 15. If one of the sides is (2w – 5), what is the length of the other side?
6. Is it possible for a rectangle to have an area of 2y2 + 11y + 18, if the side lengths are binomials?
7. The area of a rectangular book cover is 4x2 – 6x – 40. The width of the book cover is 2x – 8, what is the length of the cover?
8. The area of a rectangular swimming pool is 10x2 – 19x – 15. The length of the pool is 5x + 3. What is the width of the pool?
9. The area of a square rug is 4k2 + 12k + 9. What is the perimeter of the rug?
10. Factor: 72g2h – 43gh + 6h
11. Factor: 8x3 + 4x2 – 18x – 9
12. Which binomial is a factor of 2n2 – 32n?
	1. 2n – 8
	2. n + 16
	3. n – 16
	4. n + 4
13. Which binomial is a factor of 14a2 – 15a + 4?
	1. 7a + 2
	2. 14a – 1
	3. 7a – 1
	4. 7a – 4