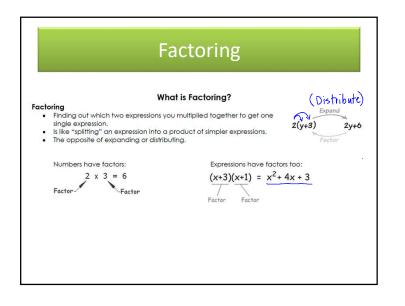
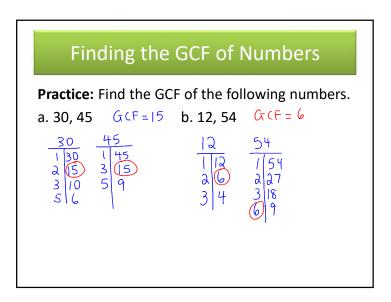
## Standard(s)

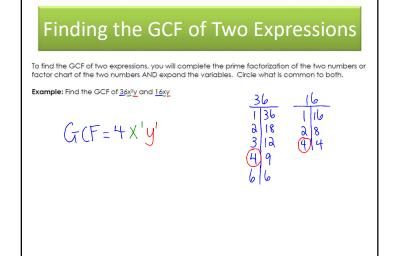
**MGSE9–12.A.SSE.3** Choose and produce an equivalent form of an expression to reveal and explain properties of the quantity represented by the expression.

Day 1 – Factor by GCF	
Standard(s):	
What do you already know about the standards?	



## **Greatest Common Factor Common Factors** • Factors that are shared by two or more numbers are called common factors. Greatest Common Factor (GCF) • The greatest of the common factors is called the Greatest Common Factor (GCF). • To find the greatest common factor, you can make a factor tree and complete the prime factorization of both numbers. The GCF is the product of the common prime factors. You can also do a factor t-chart for each number and find the largest common factor Example: Find the GCF of 56 and 104 56 104 104 2 52 2 28 2 . 2 2 . 13 4 26 (8) 13 56 = 2 . 2 . 2 . 7 $104 = 2 \cdot 2 \cdot 2 \cdot 13$ So, the GCF of 56 and 104 is 8. So, the GCF of 56 and 104 is $2 \cdot 2 \cdot 2 = 8$ .

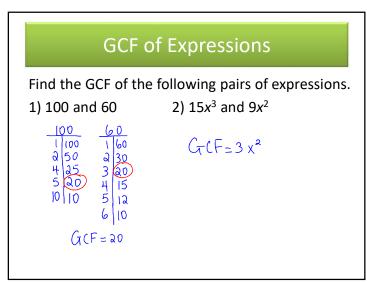


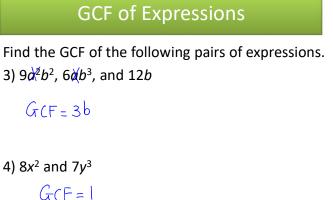


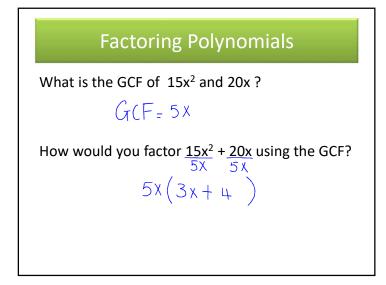
## Finding the GCF of Two Expressions

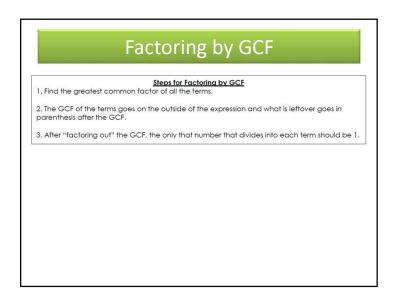
To find the GCF of two expressions, you will complete the prime factorization of the two numbers or factor chart of the two numbers AND expand the variables. Circle what is common to both.

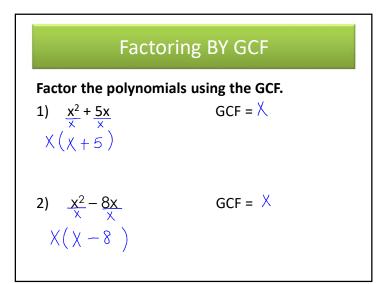
**Example:** Find the GCF of 36x<sup>2</sup>y and 16xy

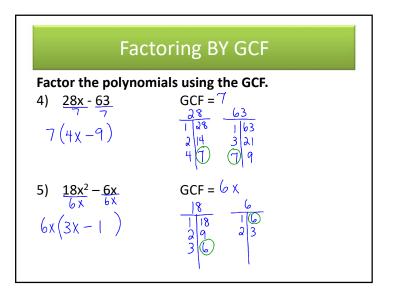












## Factoring BY GCF

Factor the polynomials using the GCF. 8)  $\frac{-9a^2}{-\alpha} \frac{-a}{-\alpha}$  GCF =  $-\alpha$   $-\alpha(9\alpha+1)$ 10)  $\frac{6x^3-9x^2}{3\chi} + \frac{12x}{3\chi}$  GCF =  $3\chi$  $3\chi(2\chi^2-3\chi+4)$ 

