PRIME FACTORIZATION

GOAL: REWRITE A NUMBER AS THE PRODUCT (MULTIPLICATION) OF ONLY PRIME NUMBERS

FACTOR TREE METHOD Write the given number to begin. Choose two numbers which multiply to the given number. These two number will form your first two branches. If the number is prime, circle it. You will not need to do anything else to this number. If the number is composite, find two numbers which multiply to the number. These new numbers will form new branches. If the number is composite, find two numbers which multiply to the number. These new numbers will form new branches. Continue until all branches have ended in prime numbers. EXAMPLE: FIND THE PRIME FACTORIZATION OF 120. BIRTHDAY CAKE METHOD Write the given number to begin. Find a prime number that divides evenly into the given number. Write this number. Divide the given number by the prime number and write the result as the next "layer" of the cake. Find a prime number that divides evenly into the new number. Find a prime number that divides evenly into the new number. Find a prime number that divides evenly into the given number. Write this number. These two numbers by the prime number and write the result as the next "layer" of the cake. Find a prime number by the prime number and write the result as the next "layer" of the cake. Find a prime number by the prime number and write the result as the next "layer" of the cake. Find a prime number by the prime number and write the result as the next "layer" of the cake. EXAMPLE: FIND THE PRIME FACTORIZATION OF 120.

PRIME FACTORIZATION

GOAL: REWRITE A NUMBER AS THE PRODUCT (MULTIPLICATION) OF ONLY PRIME NUMBERS

GOAL: REWRITE A NOIVIDER AS THE PRODUCT (MIDE TIPLICATION) OF UNLT PRIIVIE NOIVIDERS		
	FACTOR TREE METHOD	BIRTHDAY CAKE METHOD
•	Write the given number to begin.	Write the given number to begin.
•	Choose two numbers which multiply to the given number. These two numbers will form your first two branches.	Find a prime number that divides evenly into the given number. Write this number beside the given number.
•	If the number is prime, circle it. You will not need to do anything else to this number.	Divide the given number by the prime number and write the result as the next "layer" of the cake.
•	If the number is composite, find two numbers which multiply to the number. These new numbers will form new branches.	 Find a prime number that divides evenly into the new number. Repeat the process until you end with a "1." This will be the "candle" for your cake!
•	Continue until all branches have ended in prime numbers.	
	EXAMPLE: FIND THE PRIME FACTORIZATION OF 120.	EXAMPLE: FIND THE PRIME FACTORIZATION OF 120.