

# PRIME FACTORIZATION

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

FACTOR TREE METHOD	BIRTHDAY CAKE METHOD
<ul style="list-style-type: none"><li>• Write the given number to begin.</li><li>• Choose two numbers which multiply to the given number. These two numbers will form your first two branches.</li><li>• If the number is prime, circle it. You will not need to do anything else to this number.</li><li>• If the number is composite, find two numbers which multiply to the number. These new numbers will form new branches.</li><li>• Continue until all branches have ended in prime numbers.</li></ul> <p><b>EXAMPLE: FIND THE PRIME FACTORIZATION OF 120.</b></p>	<ul style="list-style-type: none"><li>• Write the given number to begin.</li><li>• Find a prime number that divides evenly into the given number. Write this number beside the given number.</li><li>• Divide the given number by the prime number and write the result as the next "layer" of the cake.</li><li>• Find a prime number that divides evenly into the new number.</li><li>• Repeat the process until you end with a "1." This will be the "candle" for your cake!</li></ul> <p><b>EXAMPLE: FIND THE PRIME FACTORIZATION OF 120.</b></p>

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