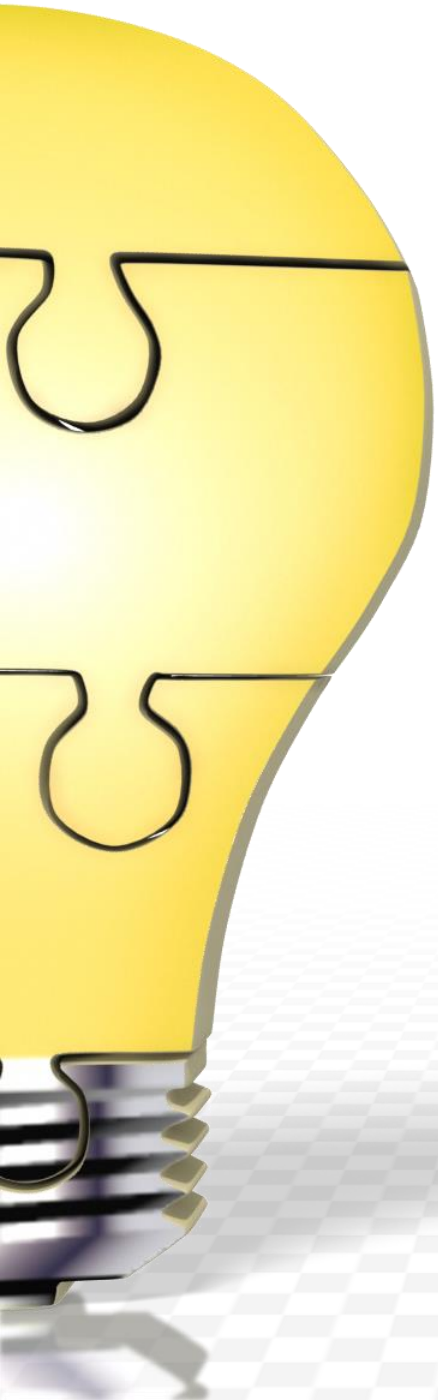


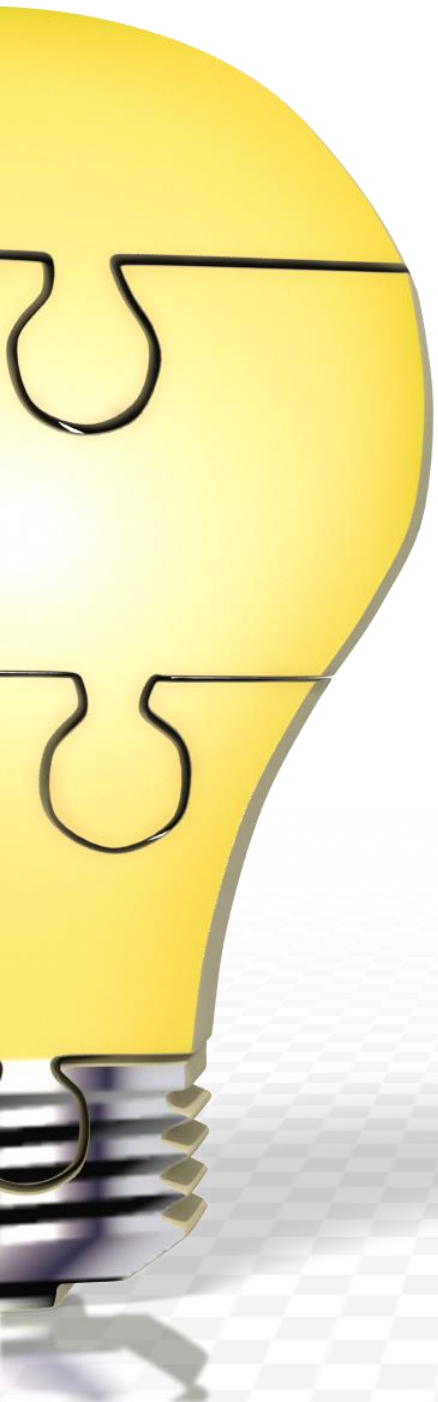
Do Now

Gabriela and Sofia were trying to find factors of a large number.

They thought the number might be prime. The number was not divisible by 2. Sofia began checking other numbers for divisibility, such as 3, 4, 5, 6, 7, 8, … Gabriela told Sofia that she didn't need to check other even numbers (such as 4, 6, 8). Sofia disagreed, and said that all numbers needed to be checked.

Who is correct? Explain your reasoning.

Prime numbers and Cryptography



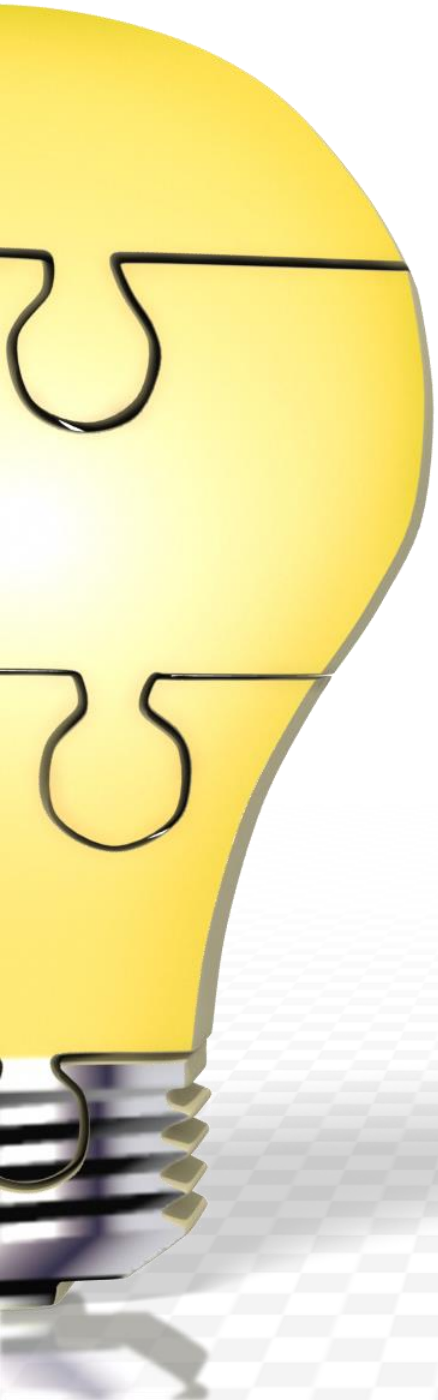
Use your knowledge of divisibility rules to create a UT diagram to list factor pairs.
Then, list all factors of the number in ascending order.
Finally, record the prime decomposition of each number in both expanded and exponential forms.

36

all factors (ascending):

prime decomposition (expanded):

prime decomposition (exponential):



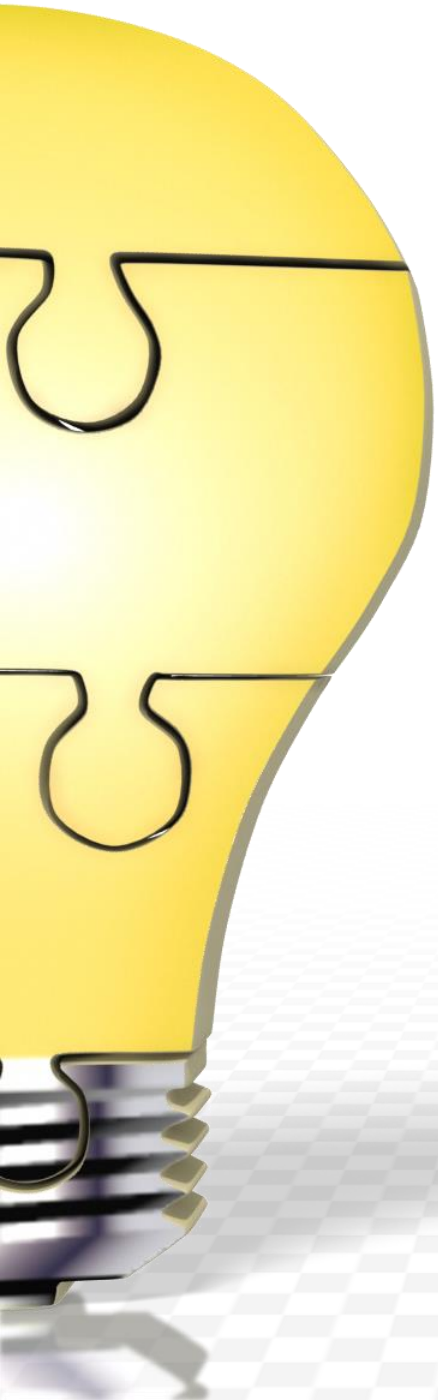
Use your knowledge of divisibility rules to create a UT diagram to list factor pairs.
Then, list all factors of the number in ascending order.
Finally, record the prime decomposition of each number in both expanded and exponential forms.

17

all factors (ascending):

prime decomposition (expanded):

prime decomposition (exponential):



Use your knowledge of divisibility rules to create a UT diagram to list factor pairs.
Then, list all factors of the number in ascending order.
Finally, record the prime decomposition of each number in both expanded and exponential forms.

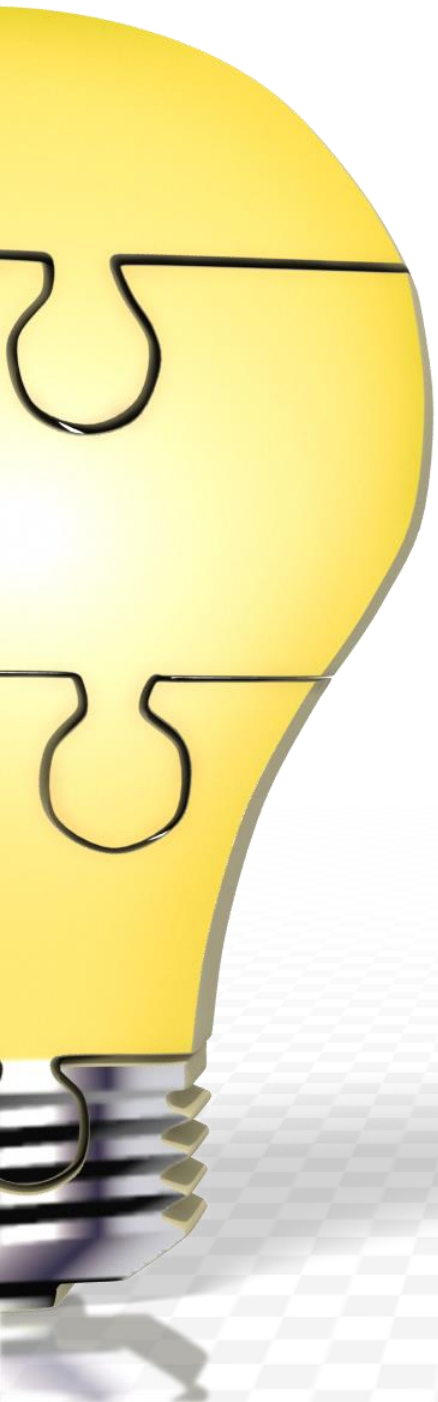
91

Semiprime number

all factors (ascending):

prime decomposition (expanded):

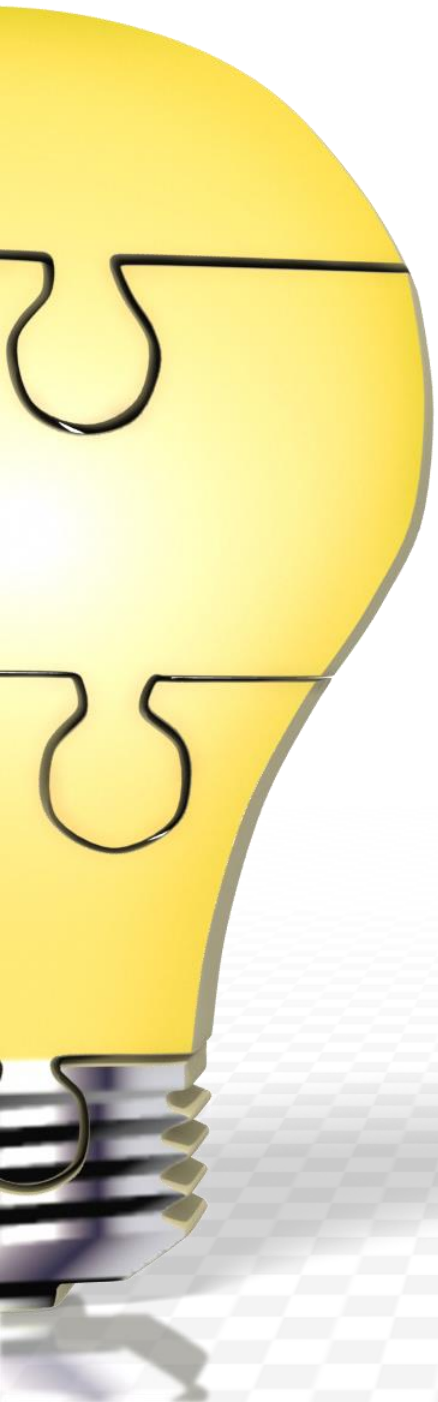
prime decomposition (exponential):



Create a list of multiples for each number below until you find the first multiple they have in common.

9

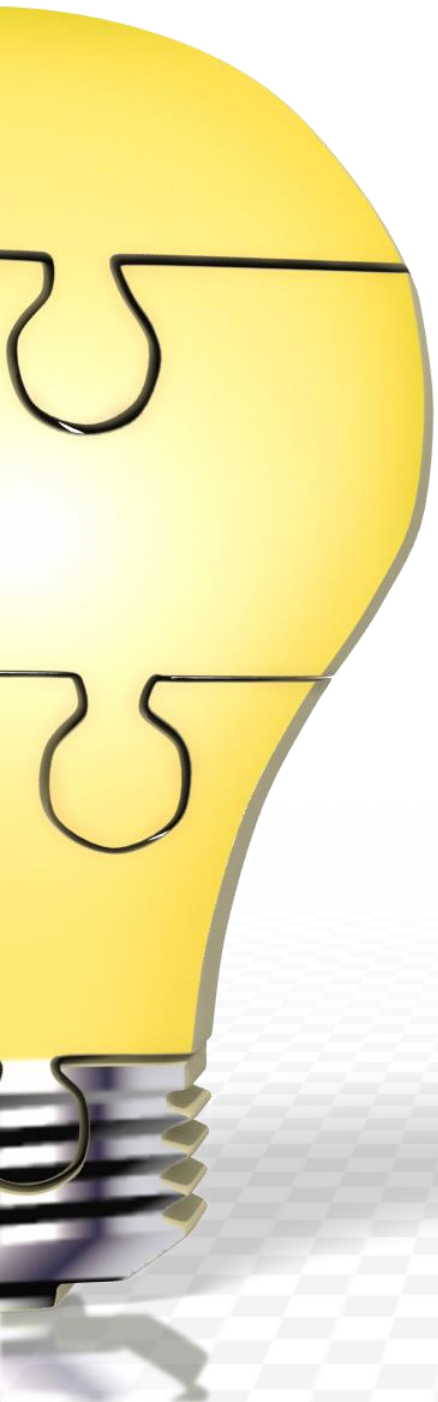
12



Create a UT list to identify all factors of each of the numbers below. Then, identify the greatest factor they have in common.

16

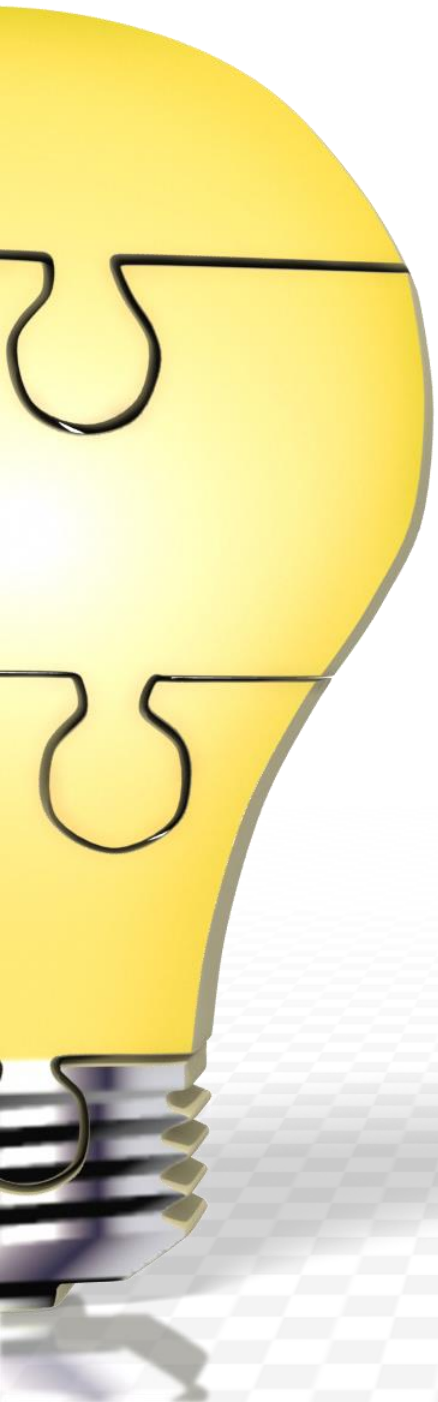
80



Create a list of multiples for each number below until you find the first multiple they have in common.

5

14



Create a UT list to identify all factors of each of the numbers below. Then, identify the greatest factor they have in common.

15 45 60