Name : _____

Score : _____ Date : _____

MATH MONKS

Prime Factorization Word Problems

Solve the given problems

1 • I am a product of 3 different prime numbers.
• My largest prime factor is 13.
• I exist between 100 and 200.

Who am I ? Find all the 3 possibilities.

2 • I am the product of 2 different prime numbers.
• One of my factors is raised to the power of 2.
• My value is between 50 and 65.
• Who am I ? Find all the 3 possibilities.

3 Find the numbers that is the product of most prime numbers below 50.

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MATH MONKS

Prime Factorization Word Problems

Answer

1 • I am a product of 3 different prime numbers.
• My largest prime factor is 13.
• I exist between 100 and 200.

Who am I ? Find all the 3 possibilities.

$2 \times 5 \times 13 = 130$, $2 \times 7 \times 13 = 182$, $3 \times 5 \times 13 = 195$,

130, 182, 195

2 • I am the product of 2 different prime numbers.
• One of my factors is raised to the power of 2.
• My value is between 50 and 65.
• Who am I ? Find all the 3 possibilities.

$5^2 \times 2^1 \times = 50$, $2^2 \times 13^1 = 52$, $3^2 \times 7^1 = 63$,

50, 52, 63

3 Find the numbers that is the product of most prime numbers below 50.

$2 \times 2 \times 2 \times 2 \times 2 = 32$

$2 \times 2 \times 2 \times 2 \times 3 = 48$

32, 48