Worksheet

07/27/2020

Free on dw-math.com

Problem quickname: 3333

1)

Determine the lcm, the least common multiple, of the two numbers. Find the prime factorizations and derive the lcm.

a) Determine the lcm of 2 and 964.

b) Determine the lcm of 3 and 292.

c) Determine the lcm of 10 and 156.

d) Determine the lcm of 10 and 500.

e) Determine the lcm of 32 and 432.

f) Determine the lcm of 6 and 127.

g) Determine the lcm of 4 and 249.

h) Determine the lcm of 2 and 377.

2)

Determine the lcm, the least common multiple, of the two numbers. Find the prime factorizations as in the example and derive the lcm.

a) Determine the lcm of 75 and 90. The lcm of 75 and 90 is $450 = 2 \cdot 3^2 \cdot 5^2$.

The prime factorizations are: $75 = 3^1 \cdot 5^2$, $90 = 2^1 \cdot 3^2 \cdot 5^1$.

Determination of the list of all occurring prime factors:{2,3,5}

First number	75	=	2^0	·	3^1	·	5^2
Second number	90	=	2^1	·	3^2	·	5^1
Prime factor exponent			$1 > 0$		$2 > 1$		$2 > 1$
lcm	450	=	2^1	·	3^2	·	5^2

b) Determine the lcm of 4 and 496.

c) Determine the lcm of 3 and 161.

d) Determine the lcm of 3 and 92.

e) Determine the lcm of 5 and 33.

f) Determine the lcm of 10 and 500.

g) Determine the lcm of 15 and 99.

h) Determine the lcm of 3 and 134.

3)

Determine the lcm, the least common multiple, of the two numbers. Find the prime factorizations as in the example and derive the lcm.

a) Determine the lcm of 2 and 39. The lcm of 2 and 39 is $78 = 2 \cdot 3 \cdot 13$.

The prime factorizations are: $2 = 2^1$, $39 = 3^1 \cdot 13^1$.

Determination of the list of all occurring prime factors:{2,3,13}

First number	2	=	2^1	·	3^0	·	13^0
Second number	39	=	2^0	·	3^1	·	13^1
Prime factor exponent			$1 > 0$		$1 > 0$		$1 > 0$
lcm	78	=	2^1	·	3^1	·	13^1

b) Determine the lcm of 2 and 35.

c) Determine the lcm of 6 and 13.

d) Determine the lcm of 3 and 45.

e) Determine the lcm of 9 and 27.

f) Determine the lcm of 2 and 84.

g) Determine the lcm of 8 and 22.

h) Determine the lcm of 2 and 49.

4)

Determine the lcm, the least common multiple, of the two numbers. Find the prime factorizations and derive the lcm.

a) Determine the lcm of 5 and 141.

b) Determine the lcm of 18 and 19.

c) Determine the lcm of 14 and 31.

d) Determine the lcm of 8 and 284.

e) Determine the lcm of 2 and 361.

f) Determine the lcm of 3 and 254.

g) Determine the lcm of 10 and 128.

h) Determine the lcm of 32 and 120.

Good Luck!