

HCF and LCM: the ladder method

Use it when you need the HCF or the LCM of two numbers.

1

Start
Write the two numbers side by side.

number

number

2

Divide
Divide both by a prime that is a factor of both.

prime

number

number

try 2, then 3, then 5, then 7

3

Write what is left
Write what is left underneath.

prime

number

number

what is left

what is left

4

Keep going
Keep going until no prime is a factor of both.

prime

number

number

prime

what is left

what is left

:

:

:

bottom

bottom

only 1 is a factor of both? stop

5

HCF
Multiply down the side.

prime

number

number

prime

what is left

what is left

bottom

bottom

HCF = prime × prime × ...

6

LCM
Multiply round the L.

prime

number

number

prime

what is left

what is left

bottom

bottom

LCM = HCF × bottom × bottom

the side is the HCF

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prime

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number

prime

what is left

what is left

bottom

bottom

HCF = prime × prime × ...

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LCM
Multiply round the L.

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LCM = HCF × bottom × bottom

the side is the HCF

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