Interleaved: HCF and LCM

1

Priya has 24 tulip bulbs and 36 daffodil bulbs. She plants them in rows. Every row has the same number of bulbs and only one kind of bulb. What is the greatest number of bulbs she can put in each row?

Which method? HCF LCM HCF, then divide LCM, then divide

$24 = 2^3 \times 3$, $36 = 2^2 \times 3^2$, $HCF = 2^2 \times 3 = 12$

Answer 12 bulbs

2

A drummer hits a cymbal every 6 beats and a gong every 8 beats. They are hit together at the start of a song. After how many beats are they next hit together?

Which method? HCF LCM HCF, then divide LCM, then divide

Answer

3

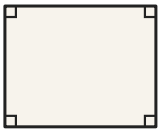
Plant pots are sold in packs of 12. Saucers for the pots are sold in packs of 20. Kim wants exactly the same number of pots and saucers. What is the smallest number of packs of pots she can buy?

Which method? HCF LCM HCF, then divide LCM, then divide

Answer

4

A tray of fudge is a rectangle 30 cm by 24 cm. It is cut into squares, all the same size, with none left over. What is the largest side length the squares could have?



Which method? HCF LCM HCF, then divide LCM, then divide

Answer

5

A school takes 84 Year 7s and 90 Year 8s on a trip. They are put into groups of the same size, as large as possible, and each group is from one year. How many groups are there? $84 = 2^2 \times 3 \times 7$ and $90 = 2 \times 3^2 \times 5$.

Which method? HCF LCM HCF, then divide LCM, then divide

Answer

6

Lena waters her ivy every 4 days, her palm every 6 days and her cactus every 10 days. She waters all three today. In how many days will she next water all three on the same day?

Which method? HCF LCM HCF, then divide LCM, then divide

Answer

7

Ella makes identical party bags from 40 balloons, 32 stickers and 24 sweets, using every one of them. She makes as many bags as she can. How many stickers go in each bag?

Which method? HCF LCM HCF, then divide LCM, then divide

Answer

8

Two cogs turn together. Cog A has 18 teeth and cog B has 24 teeth. They start with a mark on each one lined up. How many full turns does cog A make before the marks line up again?

Which method? HCF LCM HCF, then divide LCM, then divide

Answer

Interleaved: HCF and LCM *further practice*

9

Mia goes to the library every 6 days and Tom every 9 days. They are both there today. In how many days will they next both be there on the same day?

Answer

10

Two ropes are 84 m and 126 m long. Both are cut into pieces that are all the same length, as long as possible, with none left over. How many pieces are there altogether?

Answer

11

$A = 2^3 \times 3^2 \times 5$ and $B = 2^2 \times 3 \times 7$.
Find the highest common factor of A and B.

Answer

12

Napkins are sold in packs of 30 and paper plates in packs of 45. Sam wants exactly the same number of napkins and plates, with as few packs as possible.
How many packs of each does he buy?

Answer

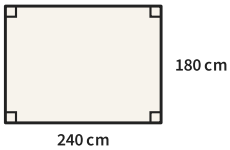
13

One alarm beeps every 15 minutes and another every 25 minutes. Both beep at 9:00 am. When do they next beep at the same time?

Answer

14

A wall 240 cm wide and 180 cm high is covered with square tiles, all the same size, as large as possible, with no cutting.
How many tiles are needed?



Answer

15

Three fairground rides start together at 2:00 pm. One starts again every 8 minutes, one every 12 minutes and one every 20 minutes. When do all three next start together?

Answer

16

Kai says the highest common factor of 12 and 18 is 36. Explain his mistake and find the highest common factor.

Answer