

Mathematics

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(Chapter – 1) (Real Numbers)(Exemplar Problems)
(Class – X)

Exercise 1.3

Question 12:

On a morning walk, three persons step off together and their steps measure 40 cm, 42 cm respectively. What is the minimum distance each should walk, so that each cover the same distance in complete steps?

Answer 12:

We have to find the LCM of 40 cm, 42 cm and 45 cm to get the required minimum distance.

Now,

$$40 = 2 \times 2 \times 2 \times 5,$$

$$42 = 2 \times 3 \times 7 \text{ and}$$

$$45 = 3 \times 3 \times 5$$

$$\therefore \text{LCM (40, 42, 45)}$$

$$= 2 \times 3 \times 5 \times 2 \times 2 \times 3 \times 7$$

$$= 30 \times 12 \times 7$$

$$= 210 \times 12$$

$$= 2520$$

Minimum distance each should walk 2520 cm. so that, each can cover the same distance in complete steps.

