

(Page 1)

WORKSHEET (9)

Date: (17-8-20)

Class - VI

Subject - Mathematics

Teacher: Mrs. Poonam Sunil

PAGE NO.

DATE

Good Morning Students!

Page 64

Lowest Common Multiple: The lowest common multiple (LCM) of two or more given numbers is the lowest (or smallest or least) of their common multiples.

Example: - Find the LCM of 40, 48 and 45

$$\begin{array}{r|l}
 2 & 40, 48, 45 \\
 2 & 20, 24, 45 \\
 2 & 10, 12, 45 \\
 2 & 5, 6, 45 \\
 3 & 5, 3, 45 \\
 3 & 5, 1, 15 \\
 5 & 5, 1, 5 \\
 & 1, 1, 1
 \end{array}$$

$$\begin{aligned}
 \therefore \text{LCM} &= 2 \times 2 \times 2 \times 2 \times 3 \times 3 \times 5 \\
 &= 720 \text{ Ans.}
 \end{aligned}$$

Ex-3.7

Q1 Renu purchases two bags of fertiliser of weights 75 kg and 69 kg.

We find the HCF of 75 and 69 to find the maximum value of weight

$$\begin{array}{r|l}
 3 & 75 \\
 5 & 25 \\
 5 & 5 \\
 & 1
 \end{array}
 \qquad
 \begin{array}{r|l}
 3 & 69 \\
 23 & 23 \\
 & 1
 \end{array}$$

$$75 = 3 \times 5 \times 5$$

$$69 = 3 \times 23$$

$$\text{HCF} = 3$$

\therefore the maximum value of weight which can measure the weight of the fertiliser exact number of times is 3 kg.

P.T.O

Q2. Three boys step off together from the same spot.

Their steps measure 63 cm, 70 cm, and 77 cm respectively. We have to find the LCM to find the minimum distance each should cover so that all can cover the distance in complete steps.

$$\begin{array}{r|l}
 2 & 63, 70, 77 \\
 \hline
 3 & 63, 35, 77 \\
 \hline
 3 & 21, 35, 77 \\
 \hline
 5 & 7, 35, 77 \\
 \hline
 7 & 7, 7, 77 \\
 \hline
 11 & 1, 1, 77 \\
 \hline
 & 1, 1, 1
 \end{array}$$

$$\therefore \text{LCM} = 2 \times 3 \times 3 \times 5 \times 7 \times 11 = 6930 \text{ cm}$$

$$\therefore \text{minimum distance} = 6930 \text{ cm.}$$

Q3. The length, breadth and height of a room are 825 cm, 675 cm and 450 cm respectively. We have to find the HCF of 825, 675 and 450

$$\begin{array}{r|l}
 3 & 825 \\
 \hline
 5 & 275 \\
 \hline
 5 & 55 \\
 \hline
 11 & 11 \\
 \hline
 & 1
 \end{array}
 \quad
 \begin{array}{r|l}
 3 & 675 \\
 \hline
 3 & 225 \\
 \hline
 3 & 75 \\
 \hline
 5 & 25 \\
 \hline
 5 & 5 \\
 \hline
 & 1
 \end{array}
 \quad
 \begin{array}{r|l}
 2 & 450 \\
 \hline
 3 & 225 \\
 \hline
 3 & 75 \\
 \hline
 5 & 25 \\
 \hline
 5 & 5 \\
 \hline
 & 1
 \end{array}$$

$$825 = 3 \times 5 \times 5 \times 11$$

$$675 = 3 \times 3 \times 3 \times 5 \times 5$$

$$450 = 2 \times 3 \times 3 \times 5 \times 5$$

$$\text{HCF} = 3 \times 5 \times 5 = 75 \text{ cm.}$$

