Ch-8

Revision Ex C (Chapter 8)

1. Find the H.C.F of:

i) 108, 288 and 420

ans:-

2 | 108	2 | 288	2 | 420
2 | 54	2 | 144	2 | 210
3 | 27	2 | 72	3 | 105
3 | 9	2 | 36	5 | 35
3	2 | 18	7
	3 | 9	
	3	

$108 = 2 \times 2 \times 3 \times 3$

$288 = 2 \times 2 \times 3 \times 2 \times 2 \times 2$

$420 = 2 \times 2 \times 3 \times 5$

H.C.F $= 3 \times 2 \times 2 = 12$

ii) 36, 54 and 138

ans:-

2 | 36	2 | 54	2 | 138
2 | 18	3 | 27	3 | 69
3 | 9	3 | 9	23 | 23
3	3	1

$36 = 2 \times 2 \times 3$

$54 = 2 \times 3 \times 3$

$138 = 2 \times 3 \times 23$

H.C.F $= 2 \times 3 = 6$

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2. Find the L.C.M of

i) 72, 80 and 252

ans:-

2 | 72	2 | 80	2 | 252
2 | 36	2 | 40	2 | 126
2 | 18	2 | 20	3 | 63
3 | 9	2 | 10	3 | 21
3	5	7

$72 = 2 \times 2 \times 2 \times 3 \times 3$

$80 = 2 \times 2 \times 2 \times 2 \times 5$

$252 = 2 \times 2 \times 3 \times 3 \times 7$

$L.C.M = 2 \times 2 \times 2 \times 3 \times 3 \times 2 \times 5 \times 7 = 5040$

ii) 48, 66 and 120

ans:-

2 | 48	2 | 66	2 | 120
2 | 24	3 | 33	2 | 60
2 | 12	11 | 11	2 | 30
2 | 6	1	3 | 15
3		5

$48 = 2 \times 2 \times 2 \times 2 \times 3$

$66 = 2 \times 3 \times 11$

$120 = 2 \times 2 \times 2 \times 3 \times 5$

$L.C.M = 2 \times 2 \times 2 \times 3^{2} \times 5 \times 11 = 2640$

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Q3. T/F

i) True

ii) True

iii) True

iv) True

A4. Product of two numbers = 12096

H.C.F = 36

L.C.M = 12096 ÷ 36

$$
\begin{array}{r}
336 \\
36\overline{)12096} \\
-108\downarrow \\
\hline
0129 \\
-108\downarrow \\
\hline
0216 \\
-216 \\
\hline
\times
\end{array}
$$

L.C.M is 336.

A5. The product of H.C.F and L.C.M of 2 no's is = 1152

One of the number = 48

Other no. = 1152 ÷ 48

$$
\begin{array}{r}
24 \\
48\overline{)1152} \\
-96\downarrow \\
\hline
192 \\
-192 \\
\hline
\times
\end{array}
$$

Other no. is 24.

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A6. i)

2	28, 42
7	14, 21
	2, 3

L.C.M = 2 X 7 X 2 X 3 = 84

The smallest no. which can be completely divisible by 28 and 42 is 84.

ii)

2	28, 42
7	14, 21
	2, 3

H.C.F = 7 X 2 = 14

The largest no. that can divide 28 and 42 completely is 14.

A7.

2	140, 168
2	70, 84
2	35, 42
7	35, 21
	5, 3

L.C.M = 2 X 2 X 2 X 3 X 5 X 7 = 840

H.C.F = ? H.C.F X L.C.M = Product of 2 no's

~~140 X 168~~ = 28 H.C.F = Product of 2 no's
~~840~~ L.C.M

= 140 X 168 = ?
840

$$
\begin{array}{r}
= 168 \\
\times\ 140 \\
\hline
000 \\
6720 \\
+\ 16800 \\
\hline
23,520
\end{array}
$$

$$= \frac{23520}{840}$$

$$
\begin{array}{r}
28 \\
840 \overline{)23520} \\
-1680\downarrow \\
\hline
6720 \\
-6720 \\
\hline
0
\end{array}
$$

H.C.F is = 28

8.

2	108, 450
3	54, 225
3	18, 75
2	6, 25
3	3, 25
5	1, 5
	1, 1

$$
\begin{array}{r|l}
2 & 450 \\
\hline
3 & 225 \\
\hline
3 & 75 \\
\hline
5 & 25 \\
\hline
5 & 5 \\
\hline
 & 1
\end{array}
$$

H.C.F = 3 × 3

$108 = 2 \times 3 \times 3 \times 2 \times 3$

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

H.C.F = $3 \times 3 \times 2 = 18$

L.C.M = ?

L.C.M = Product of 2 no's / H.C.F

$= \frac{108 \times 450}{18} = ?$

$= 108$ (③)

$\times 450$

000

5400

$+ 43200$

$48,600$

$= \frac{48600}{18}$

$18 \overline{)48600}\ (2700$

$-36\downarrow$

126

$-126\downarrow$

00

$-0\downarrow$

00

-0

$\times$

L.C.M is = 2,700