H.W. 26.06.2022

Ex - 8 (B)

Date ___/___/______

1\. i) F16 = 1, 2, 4, 8, 16
F35 = 1, 5, 7, 35
HCF = 1

ii) F25 = 1, 5, 25
F20 = 1, 2, 4, 5, 10, 20
HCF = 5

iii) F27 = 1, 3, 9, 27
F75 = 1, 3, 5, 15, 25, 75
HCF = 3

iv) F8 = 1, 2, 4, 8
F12 = 1, 2, 3, 4, 6, 12
~~HCF = 2 X 4 X 1 = 8~~
F18 = 1, 2, 3, 6, 9, 18
HCF = 2

v) F24 = 1, 2, 3, 4, 6, 8, 12, 24
F36 = 1, 2, 3, 4, 6, 9, 12, 18, 36
F45 = 1, 3, 5, 9, 15, 45
F60 = 1, 2, 3, 4, 5, 6, 10, 12, 20, 30, 60
HCF = 3

2\. i) Prime factor of 5 = 1 X 5

Prime factor of 8 = 2 X 2 X 2 X 1

HCF of 5 and 8 = 1

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iii) Prime factor of 24 = 2 x 2 x 2 x 3 x 1

Prime factor of 49 = 7 x 7 x 1

HCF of 24 and 49 = 1

iii) Prime factor of 40 = 2 x 2 x 2 x 5 x 1

Prime factor of 80 = 2 x 2 x 2 x 2 x 5 x 1

~~HCF of 40 and 80 = 2 x 2 x 2 x 1 = 8~~

Prime factor of 60 = 2 x 2 x 3 x 5 x 1

HCF of 40, 60 and 80 = 2 x 2 x 5 x 1 = 20

iv) Prime factor of 48 = 2 x 2 x 2 x 2 x 3 x 1

Prime factor of 84 = 2 x 2 x 3 x 7 x 1

Prime factor of 88 = 2 x 2 x 2 x 11 x 1

HCF of 48, 84 and 88 = 2 x 2 x 1 = 4

v) Prime factor of 12 = 2 x 2 x 3 x 1

Prime factor of 16 = 2 x 2 x 2 x 2 x 1

Prime factor of 28 = 2 x 2 x 7 x 1

HCF of 12, 16 and 28 = 2 x 2 x 1 = 4

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3. i) 16, 24

$$\begin{array}{r|l}
16 \,\big)\, 24 \,(1 & \\
\underline{16} & \\
8 \,\big)\, 16 \,(2 & \\
\underline{16} & \\
00 &
\end{array}$$

HCF = 2

ii) 18, 30

$$\begin{array}{r|l}
18 \,\big)\, 30 \,(1 & \\
\underline{18} & \\
12 \,\big)\, 18 \,(1 & \\
\underline{12} & \\
6 \,\big)\, 12 \,(2 & \\
\underline{12} & \\
0 &
\end{array}$$

HCF = 6

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iii) 7, 14, 24

```
14 | 24 | 1
   14
   --
10 | 14 | 1
   10
   --
 4 | 10 | 2
     8
     --
 2 | 4  | 2
     4
     --
     0
```

HCF = 1

iv) 70, 80, 120 and 150

```
70 120   80 | 120 | 1
             80
             --
          40 | 80  | 2
               80
               --
               00
```

(iv) 70, 80, 120 and 150

```
120 | 150 | 1
      120
      ---
 30 | 120 | 4
      120
      ---
      000
```

```
30 | 80 | 2
     60
     --
20 | 30 | 1
     20
     --
10 | 20 | 2
     20
     --
     00
```

```
2 | 7 | 3
    6
    -
1 | 2 | 2
    2
    -
    0
```


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10 | 70 | 7
70
00

HCF = 10

v) 32, 56, 46

46 | 56 | 1
46
10 | 46 | 4
40
6 | 10 | 1
6
4 | 6 | 1
4
2 | 4 | 2
4
0

2 | 32 | 16
32
00

HCF =

4. i) 45, 75 and 135

75 | 135 | 1
75
60 | 75 | 1
60
15 | 60 | 4
60
00

15 | 45 | 3
45
00

HCF = 15

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ii) 48, 36, 96

~~48 | 96~~ 36 | 48 | 1
36
12 | 36 | 3
36
00

12 | 96 | 8
96
00

HCF = 12

iii) 66, 33, 132

33 | 66 | 2
66
00

33 | 132 | 4
132
000

HCF = 33

iv) 24, 36, 60, 132

24 | 36 | 1
24
12 | 24 | 2
24
00

12 | 60 | 5
60
00

12 | 132 | 11
132
000

HCF = 12

v) 30, 60, 90, 105

30 | 60 | 2
60
00

30 | 90 | 3
90
00

30 | 105 | 3
90
15 | 30 | 2
30
00

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HCF = 15

5. 180, 225, 315

We need to find the HCF of 180, 225, 315

225 | 315 | 1
225
90 | 225 | 2
180
45 | 90 | 2
90
00

45 | 180 | 4
180
0

HCF = 45

8. 93 - 3 = 90, 111 - 3 = 108, 129 - 3 = 126

111 | 129 | 1
111
18 | 111 | 6
108
3 | 18 | 6
18
00

~~3 | 93 | 31~~

~~90 | 180~~

90 | 108 | 1
90
18 | 90 | 5
90
00

18 | 126 | 7
126
000

HCF = 18 is the greatest number that will divided 93, 111, 129.

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6. $45 = 3 \times 5 \times 3$

$56 = 2 \times 2 \times 2 \times 7$

There is no common factor

So, 45 and 56 are coprime number.

7. $15 = 3 \times 5$

$16 = 2 \times 2 \times 2 \times 2$

$21 = 3 \times 7$

$28 = 2 \times 2 \times 7$

15 and 16, 15 and 28, 16 and 21 are pair of coprime number.

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