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Exercise = 10(E)

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② a, 16 and 48

2 16	2 48
2 8	2 24
2 4	2 12
2 2	2 6
1	3 3
	1

$$16 \rightarrow 2 \times 2 \times 2 \times 2$$

$$48 \rightarrow 2 \times 2 \times 2 \times 2 \times 3$$

$$\text{LCM} = 2 \times 2 \times 2 \times 2 \times 3 = 48$$

b, 8, 12 and 16

2 8	2 12	2 16
2 4	2 6	2 8
2	3 3	2 4
	1	2 2
		1

$$8 \rightarrow 2 \times 2 \times 2$$

$$12 \rightarrow 2 \times 2 \times 3$$

$$16 \rightarrow 2 \times 2 \times 2 \times 2$$

$$\text{LCM} = 2 \times 2 \times 2 \times 3 \times 2 = 48$$

c, 20, 25

2	20
2	10
5	5
	1

5	25
5	5
	1

$$\text{factor of } 20 \rightarrow 2 \times 2 \times 5$$

$$\text{factor of } 25 \rightarrow 5 \times 5$$

$$\text{LCM} = 5 \times 2 \times 2 \times 5 = 100$$

d, 40, 50

2	40
2	20
2	10
5	5
	1

2	50
5	25
5	5
	1

factor of 40 $\Rightarrow 2 \times 2 \times 2 \times 5$

factor of 50 $\Rightarrow 2 \times 5 \times 5$

$$\text{LCM} \Rightarrow 2 \times 5 \times 2 \times 2 \times 5 = 200$$

e, 56, 64

2	56
2	28
2	14
7	7
	1

2	64
2	32
2	16
2	8
2	4
2	2
	1

factors of 56 $\rightarrow 2 \times 2 \times 2 \times 7$

factors of 64 $\rightarrow 2 \times 2 \times 2 \times 2 \times 2$
 $\times 2$

LCM $\rightarrow 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 7 \rightarrow 448$

A, 96 and 144

2	96
2	48
2	24
2	12
2	6
3	3
	1

2	144
2	72
2	36
2	18
3	9
3	3
	1

factors of 96 $\rightarrow 2 \times 2 \times 2 \times 2 \times 2 \times 3$

factors of 144 $\rightarrow 2 \times 2 \times 2 \times 2 \times 3 \times 3$

LCM $\rightarrow 2 \times 2 \times 2 \times 2 \times 3 \times 3 \times 2 \rightarrow 288$

g. 36 and 42

$$\begin{array}{r|l} 2 & 36 \\ \hline 2 & 18 \\ \hline 3 & 9 \\ \hline 3 & 3 \\ \hline & 1 \end{array}$$

$$\begin{array}{r|l} 2 & 42 \\ \hline 3 & 21 \\ \hline 7 & 7 \\ \hline & 1 \end{array}$$

factors of 36 $\rightarrow 2 \times 2 \times 3 \times 3$

factors of 42 $\rightarrow 2 \times 3 \times 7$

LCM $\rightarrow 2 \times 3 \times 2 \times 3 \times 7 \rightarrow 252$

h. 21 and 36

$$\begin{array}{r|l} 3 & 21 \\ \hline 7 & 7 \\ \hline & 1 \end{array}$$

$$\begin{array}{r|l} 2 & 36 \\ \hline 2 & 18 \\ \hline 3 & 9 \\ \hline 3 & 3 \\ \hline & 1 \end{array}$$

factors of 21 $\rightarrow 3 \times 7$

factors of 36 $\rightarrow 2 \times 2 \times 3 \times 3$

$$\text{LCM} \rightarrow 3 \times 3 \times 2 \times 2 \times 7 \rightarrow 252$$

i, 15 and 45

$$\begin{array}{r|l} 3 & 15 \\ \hline 5 & 5 \\ \hline & 1 \end{array}$$

$$\begin{array}{r|l} 3 & 45 \\ \hline 3 & 15 \\ \hline 5 & 5 \\ \hline & 1 \end{array}$$

factors of 15 $\rightarrow 3 \times 5$

factors of 45 $\rightarrow 3 \times 3 \times 5$

$$\text{LCM} \rightarrow 3 \times 5 \times 3 = 45$$

j, 10, 20 and 30

$$\begin{array}{r|l} 2 & 10 \\ \hline 5 & 5 \\ \hline & 1 \end{array}$$

$$\begin{array}{r|l} 2 & 20 \\ \hline 2 & 10 \\ \hline 5 & 5 \\ \hline & 1 \end{array}$$

$$\begin{array}{r|l} 2 & 30 \\ \hline 3 & 15 \\ \hline 5 & 5 \\ \hline & 1 \end{array}$$

Factors of 10 \rightarrow 2 \times 5

Factors of 20 \rightarrow 2 \times 2 \times 5

Factors of 30 \rightarrow 2 \times 3 \times 5

LCM \rightarrow 2 \times 5 \times 2 \times 3 = 60