

PARAGON CONVENT SCHOOL

SECTOR – 24 B , CHANDIGARH

ANSWER KEY

CLASS – 6

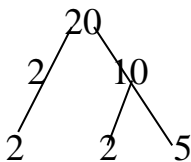
SUB – MATHS

EXERCISE – 3A

Q-1. Draw the factor tree and write down the prime factorisation –

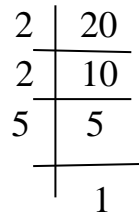
(a) 20

Factor tree :



$$20 = 2 \times 2 \times 5$$

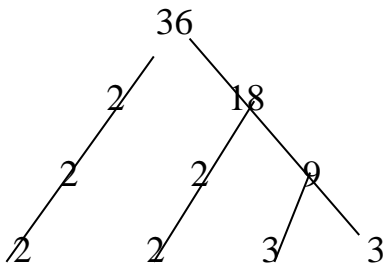
By Prime factorisation



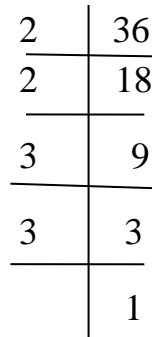
$$\text{factors of } 20 = 2 \times 2 \times 5$$

(b) 36

Factor tree :



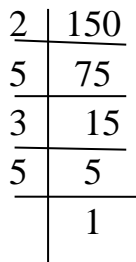
$$36 = 2 \times 2 \times 3 \times 3$$



$$\text{factors of } 36 = 2 \times 2 \times 3 \times 3$$

Q-2. Express the following as a product of prime factors :

(a) 150



$$\text{factors of } 150 = 2 \times 3 \times 5 \times 5$$

(b) 725

$$\begin{array}{r|l} 5 & 725 \\ \hline 5 & 125 \\ \hline 5 & 25 \\ \hline 5 & 5 \\ \hline & 1 \end{array}$$

factors of 725 = $5 \times 5 \times 5 \times 5$

(d) 2 732

$$\begin{array}{r|l} 2 & 732 \\ \hline 2 & 366 \\ \hline 3 & 183 \\ \hline 61 & 61 \\ \hline & 1 \end{array}$$

factors of 732 = $2 \times 2 \times 3 \times 61$

(e) 84

$$\begin{array}{r|l} 2 & 84 \\ \hline 2 & 42 \\ \hline 3 & 21 \\ \hline 7 & 7 \\ \hline & 1 \end{array}$$

factors of 84 = $2 \times 2 \times 3 \times 7$

Q-4. Write the smallest 4 digit no and find its prime factorisation .

Sol : smallest 4 digit no = 1000

$$\begin{array}{r|l} 2 & 1000 \\ \hline 2 & 500 \\ \hline 2 & 250 \\ \hline 5 & 125 \\ \hline 5 & 25 \\ \hline & 5 \\ \hline & 1 \end{array}$$

factors of 1000 = $2 \times 2 \times 2 \times 5 \times 5 \times 5$

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

Q-5 Write the largest 4 digit no and find its prime factorisation.

Sol : largest 4 digit no = 9999

$$\begin{array}{r|l} 3 & 9999 \\ \hline 3 & 3333 \\ \hline 11 & 1111 \\ \hline 101 & 101 \\ \hline & 1 \end{array} \quad \text{factors of 9999} = 3 \times 3 \times 11 \times 101$$

EXERCISE – 3B

Q-1. Find the common factors :

(a) 12 , 72

factors of 12 = 1,2,3,4,6,12

Factors of 72 = 1,2,3,4,6,8,9,12,18,24,36,72

Common factors = 1,2,3,4,6,12

(b) 25 , 50

factors of 25 = 1,5,25

Factors of 50 = 1,2,5,10,25,50

Common factors = 1 ,5,25

(c) 66 , 64

Factors of 66 = 1,2,3,6,11,22,33,66

Factors of 64 = 1,2,4,8,16,32,64

Common factors = 1 ,2

(e) 36 , 45

Factors of 36 = 1,2,3,4,6,9,12,18,36

Factors of 45 = 1,3,5,9,15,45

Common factors are = 1,3,9

Q-2. Find the HCF of the following pairs of no by listing the factors.

(a) 24 , 72

Factors of 24 = 1,2,3,4,6,8,12,24

Factors of 72 = 1,2,3,4,6,8,9,12,18,24,36,72

Common factors are = 1,2,3,4,6,8,12,24

The HCF is = 24

(b) 45 , 81

Factors of 45 = 1,3,5,9,15,45

Factors of 81 = 1,3,9,27,81

Common factors are = 1,3,9

The HCF is = 9

(c) 18 , 21

Factors of 18 = 1,2,3,6,9,18

Factors of 21 = 1,3,7,21

Common factors are = 1,3

The HCF is = 3

(e) 69 , 39

Factors of 69 = 1,3,23,69

Factors of 39 = 1,3,13,39

Common factors are = 1,3

The HCF is = 3

(h) 27 , 63

Factors of 27 = 1,3,9,27

Factors of 63 = 1,3,7,9,21,63

Common factors are = 1,3,9

The HCF is = 9

