

WORKSHEET

Class - VI

Subject - Mathematics

Teacher: Mrs Poonam Sunil

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Good Morning Students!

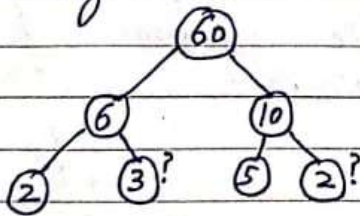
Today I am going to continue Ex-3.5

Q1 Which of the following statements are true?

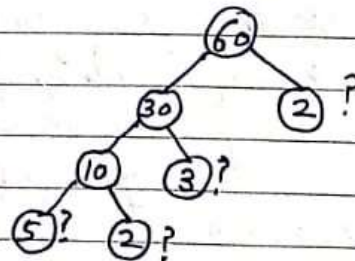
- a) If a number is divisible by 3, it must be divisible by 9. FALSE
- b) If a number is divisible by 9, it must be divisible by 3. TRUE
- c) A number is divisible by 18, if it is divisible by both 3 and 6. FALSE
- d) If a number is divisible by 9 and 10 both, then it must be divisible by 90. TRUE
- e) If two numbers are coprimes, at least one of them must be prime. FALSE
- f) All numbers which are divisible by 4 must also be divisible by 8. FALSE
- g) All numbers which are divisible by 8 must also be divisible by 4. TRUE
- h) If a number exactly divides two numbers separately, it must exactly divide their sum. TRUE
- i) If a number exactly divides the sum of two numbers, it must exactly divide the two numbers separately. FALSE

Q2. Here are two different factor tree for 60. Write the missing numbers

a)



b)



Q3 Which factors are not included in the prime factorisation of a composite number?

Ans. 1 and the number itself.

Q4 Write the greatest 4-digit number and express it in terms of its prime factors.

Sol:- Greatest 4-digit number = 9999
Let's find prime factors of 9999

$$\begin{array}{r|l} 3 & 9999 \\ \hline 3 & 3333 \\ \hline 11 & 1111 \\ \hline 101 & 101 \\ \hline & 1 \end{array}$$

\therefore Prime factors of 9999 = $3 \times 3 \times 11 \times 101$

Q5 Write the smallest 5-digit number and express it in the form of its prime factors.

Sol:- Smallest 5-digit number = 10000
Let's find prime factors of 10000

$$\begin{array}{r|l} 2 & 10000 \\ \hline 2 & 5000 \\ \hline 2 & 2500 \\ \hline 2 & 1250 \\ \hline 5 & 625 \\ \hline 5 & 125 \\ \hline 5 & 25 \\ \hline 5 & 5 \\ \hline & 1 \end{array}$$

\therefore Prime factors of
10000 = $2 \times 2 \times 2 \times 2 \times 5 \times 5 \times 5 \times 5$

Q6 Find all the prime factors of 1729 and arrange them in ascending order. Now state the relation, if any, between two consecutive prime factors.

Sol:- Prime factors of 1729 are
= $7 \times 13 \times 19$

$$\begin{array}{r|l} 7 & 1729 \\ \hline 13 & 247 \\ \hline 19 & 19 \\ \hline & 1 \end{array}$$

Relation:

The difference of two consecutive prime factors is 6.

x ————— x