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Class :-06(Maths)   Date:- 25.05.2021

1. Which of the following statements are true?

(a) If a number is divisible by 3, it must be divisible by 9.

(b) If a number is divisible by 9, it must be divisible by 3.

(c) A number is divisible by 18, if it is divisible by both 3 and 6.

(d) If a number is divisible by 9 and 10 both, then it must be divisible by 90.

(e) If two numbers are co-primes, at least one of them must be prime.

(f) All numbers which are divisible by 4 must also be divisible by 8.

(g) All numbers which are divisible by 8 must also be divisible by 4.

(h) If a number exactly divides two numbers separately, it must exactly divide their sum.

(i) If a number exactly divides the sum of two numbers, it must exactly divide the two numbers separately.

Solutions:

**(a)** False, 6 is divisible by 3 but is not divisible by 9

(b) True, as 9 = 3 × 3. Hence, if a number is divisible by 9, it will also be divisible by 3

(c) False. Since 30 is divisible by both 3 and 6 but is not divisible by 18

(d) True, as 9 × 10 = 90. Hence, if a number is divisible by both 9 and 10 then it is divisible by 90

(e) False. Since 15 and 32 are co-primes and also composite numbers

(f) False, as 12 is divisible by 4 but is not divisible by 8

(g) True, as 2 × 4 = 8. Hence, if a number is divisible by 8, it will also be divisible by 2 and 4

(h) True, as 2 divides 4 and 8 and it also divides 12 (4 + 8 = 12)

(i) False, since, 2 divides 12 but it does not divide 7 and 5

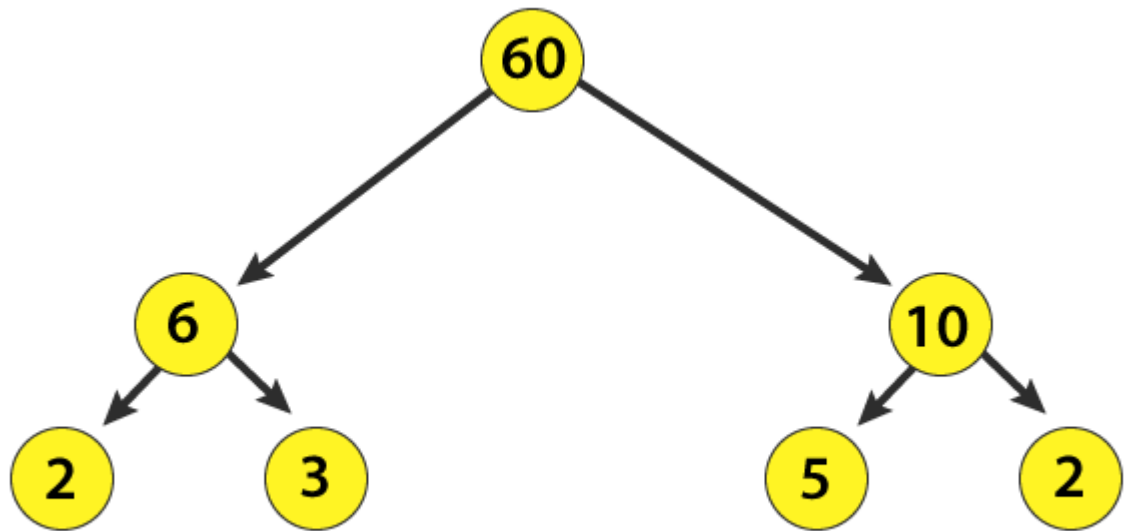**2. Here are two different factor trees for 60. Write the missing numbers.**

(a)
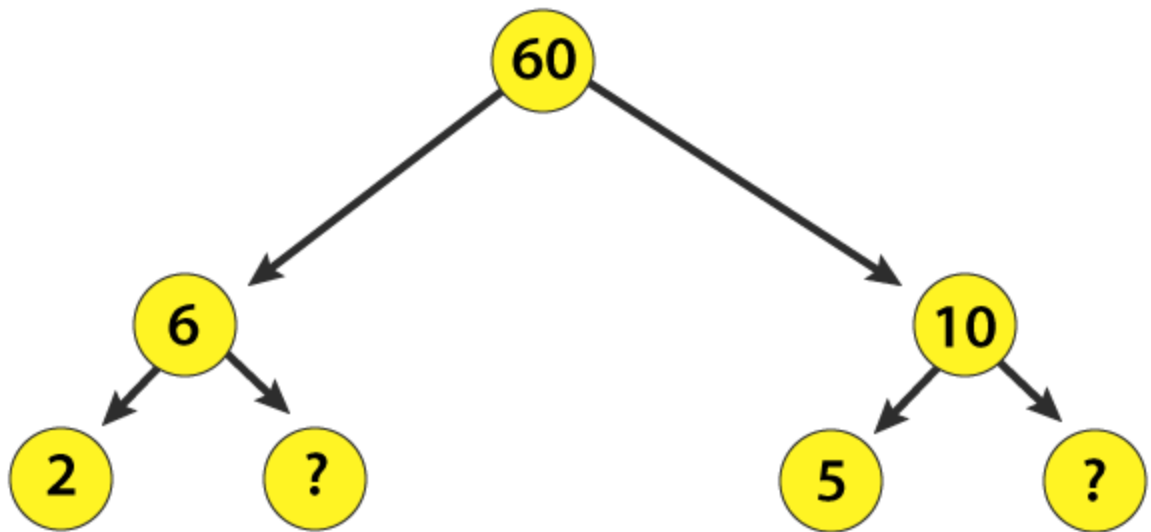
(b)
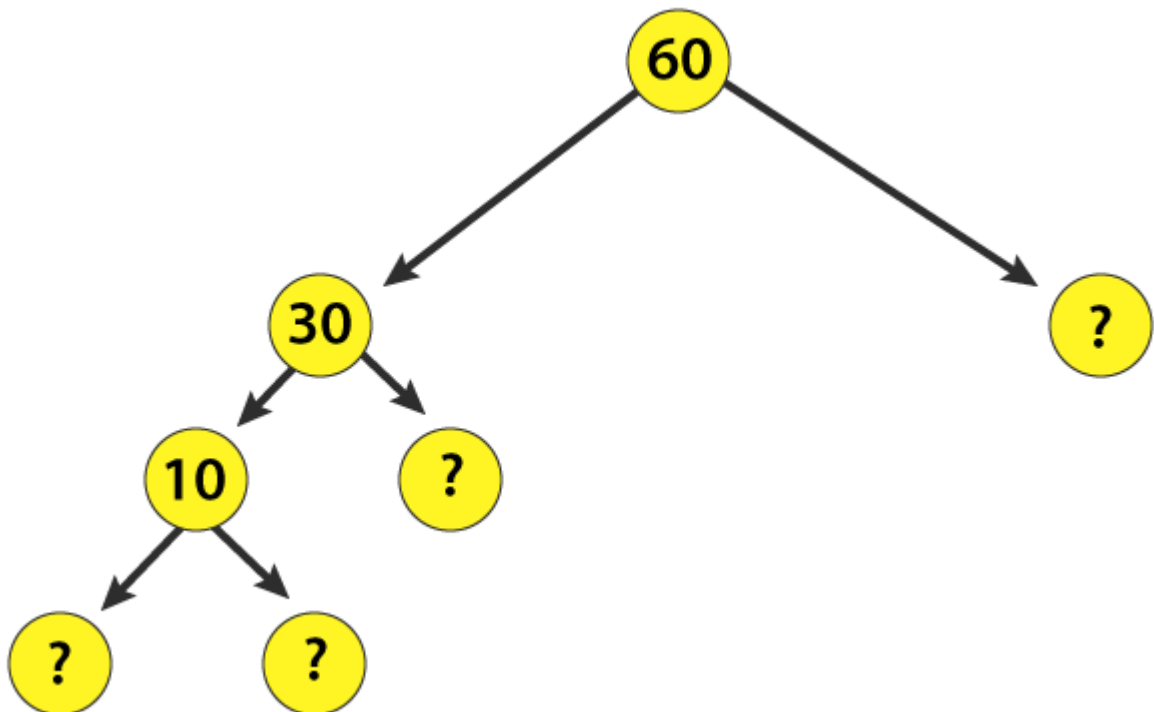
Solutions:

(a) Since, 6 = 2 × 3 and 10 = 5 × 2

(b) Since, 60 = 30 × 2

30 = 10 × 3

10 = 5 × 2