Name of the Bundle	Intermediate Bundle V1	Subject	Aptitude
Topic	Number System - 2	Last updated on	14 August 2024

CONCEPT 1 – NUMBER OF FACTORS

1. The number of factors of 4200 are _____.
   a. 64
   b. 56
   c. 46
   d. 48

Ans: d. 48

Explanation: If $N= a^p \times b^q \times c^r$ then, total no. of factors = $(p+1)x(q+1)x(r+1)$

$4200= 2^3 \times 3^1 \times 5^2 \times 7^1$
$= (3+1)\times(1+1)\times(2+1)\times(1+1)$
$= 4\times2\times3\times2$
$= 48$
So, the number of factors of 4200 is 48.

2. The number of factors of 72 are _____.
   a. 12
   b. 25
   c. 32
   d. 8

Ans: a. 12

3. The number of factors of 180 are _____.
   a. 15
   b. 18
   c. 20
   d. 9

Ans: b. 18

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4. How many factors of 40 are odd?
   a. 3
   b. 4
   c. 2
   d. 1

Ans: c. 2

Explanation: If $N= a^p \times b^q \times c^r$ then, no. of odd factors = **Product of Power of odd numbers + 1**

$40 = 2^3 \times 5^1$
$=1+1$
$=2$
So, the number of odd factors of 40 is 2.

5. The number of odd factors of 270 are _____.
   a. 32
   b. 5
   c. 7
   d. 8

Ans: d. 8

6. How many factors of 40 are odd?
   a. 9
   b. 4
   c. 5
   d. 10

Ans: c. 5

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7. Find the number of even factors of 24.
   a. 6
   b. 12
   c. 24
   d. 1

Ans: a.6

Explanation: If $N= a^p \times b^q \times c^r$ then, no. of even factors = $px(q+1)x(r+1)$

$24 = 2^3 \times 3$

$=3 \times (1+1)$
$=3x2$
$=6$

So, the number of even factors of 24 is 6.

8. How many factors of $2^7*3^4*5^3*7$ are even?
   a. 280
   b. 320
   c. 84
   d. 40

Ans: a.280

9. The number of prime factors in 72 are ____.
   a. 12
   b. 5
   c. 9
   d. 2

Ans: b. 5

Explanation: No. of prime factors = Sum of their power

$72 = 2^3 \times 3^2$

$= 3+2$
$= 5$

So, the number of prime factors of 72 is 5.

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10. How many prime numbers exist in the factorisation of $2^3x5^7x21^4x10^8$?
    a. 20
    b. 34
    c. 25
    d. 15

Ans: b.34

CONCEPT 2 – NUMBER OF ZEROS

1. The number of zeros at the end of the product 12 × 13 × 14 ..... 84 is ____.
    a. 15
    b. 17
    c. 20
    d. 21

Ans: b. 17

2. Find the number of zeros at the end of the product "5 × 7 × 9 × 2 × 11".
    a. 2
    b. 3
    c. 4
    d. 1

Ans: d. 1

Explanation: Number of pair 2's and 5's = 1 Number of zero = 1