

## CHAPTER-1 | A Square and A Cube

QUIZ  
PART-10

1. Smallest square number divisible by 4, 9, and 10 is:

- A. 180  
B. 360  
C. 900  
D. 1800 (C)

**Explanation:** 900 is divisible by 4, 9, and 10, and it is  $30^2$ .

2. 9408 must be multiplied by:

- A. 2  
B. 3  
C. 6  
D. 7 (B)

**Explanation:**  $9408 = 2^6 \times 3 \times 7^2$ , so multiply by 3.

3. Square root of the product  $9408 \times 3$  is:

- A. 148  
B. 158  
C. 168  
D. 178 (C)

**Explanation:**  $9408 \times 3 = 28224 = 168^2$ .

4. How many numbers lie between  $16^2$  and  $17^2$ ?

- A. 16  
B. 32  
C. 33  
D. 34 (B)

**Explanation:** Numbers between consecutive squares  $n^2$  and  $(n+1)^2$  are  $2n$ .

5. How many numbers lie between  $99^2$  and  $100^2$ ?

- A. 99  
B. 100  
C. 198  
D. 199 (C)

**Explanation:**  $2 \times 99 = 198$ .

6. In  $4^2 + 5^2 + 20^2 = (\_)^2$ , the missing number is:

- A. 20  
B. 21  
C. 22  
D. 25 (B)

**Explanation:**  $16 + 25 + 400 = 441 = 21^2$ .

7. In  $9^2 + 10^2 + (\_)^2 = (\_)^2$ , the first missing number is:

- A. 80  
B. 90  
C. 91  
D. 100 (B)

**Explanation:**  $9 \times 10 = 90$ .

8. In  $9^2 + 10^2 + 90^2 = (\_)^2$ , the missing number is:

- A. 89  
B. 90  
C. 91  
D. 92 (C)

**Explanation:**  $81 + 100 + 8100 = 8281 = 91^2$ .

9. What is the prime factorisation of 900?

- A.  $2^2 \times 3^2 \times 5^2$   
B.  $2^3 \times 3^2 \times 5$   
C.  $2^2 \times 3 \times 5^2$   
D.  $2 \times 3^2 \times 5^2$  (A)

**Explanation:**  $900 = 2^2 \times 3^2 \times 5^2$

10. Which pattern is correct?

- A.  $1^2 + 2^2 + 2^2 = 3^2$   
B.  $1^2 + 2^2 + 2^2 = 4^2$   
C.  $2^2 + 3^2 + 6^2 = 6^2$   
D.  $3^2 + 4^2 + 12^2 = 12^2$  (A)

**Explanation:**  $1 + 4 + 4 = 9 = 3^2$ .