

Mathematics

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(Chapter – 1) (Real Numbers)(Exemplar Problems)
(Class – X)

Exercise 1.1

Choose the correct answer from the given four options in the following questions:

Question 7:

If two positive integers p and q can be expressed as $p = ab^2$ and $q = a^3b$; where a, b being prime numbers, then LCM (p, q) is equal to

- (A) ab (B) a^2b^2 (C) a^3b^2 (D) a^3b^3

Answer 7:

- (C) a^3b^2

Solution:

Given that,

$$p = ab^2 = a \times b \times b \quad \text{and} \quad q = a^3b = a \times a \times a \times b$$

\therefore LCM of p and q

$$= LCM (ab^2, a^3b)$$

$$= a \times b \times b \times a \times a = a^3b^2$$

[Since, LCM is the product of the greatest power of each prime factor involved in the numbers]

