CUBES AND CUBE ROOTS

CUBE ROOT OF A CUBE NUMBER

EXERCISE

Q.1 Check whether following numbers are perfect cubes or not :

(a) 4096 (b) 6859

(c) 52728 (d) 88434

Q.2 Check whether 27648 is a perfect cube or not. If not, find the least number by which 27648 must be multiplied so that the product is a perfect cube. Also write the perfect cube so obtained.

Q.3 Find the cube root of

(a) 474552 (b) $\frac{729}{2197}$ (c) 216×1000

(d) -9261×512 (e) -10648

ANSWER KEY

1. (a) 4096 is a perfect cube,

(b) 6859 is a perfect cube.

(c) 52728 is not perfect cube.

(d) 88434 is not a perfect cube.

2. so 27648 is not perfect cubes. We multiply 27648 by $2 \times 2 = 4$ to obtain a perfect cube.

3. (a) Cube root of 474552 is $2 \times 3 \times 13$ i.e. 78.

(b) cube root of $\frac{729}{2197}$ is $\frac{9}{13}$

(c) cube root of 216×1000 is 6×10 i.e. 60

(d) cube root of -9216×512 is

$-3 \times 7 \times 2^3 = -21 \times 8 = -168$

(e) cube root of -10648 is -2×11 i.e. -22