VIDYA SHREE ACADEMY
SR. SEC. SCHOOL
An English Medium Co.Ed. School | Science & Commerce

W : www.vsajaipur.com | E : vsajaipur@gmail.com M. : +91 9460356652, 8058999828
Add. : 84, Krishna Vihar, Behind Narayan Niwas, Gopalpura Bypass, Jaipur - 302015

f /vsajaipur | **Twitter** /vsajaipur | **YouTube** /vidyashreeacademy | **Instagram** /vsa_jaipur

VSA — A Real English Medium School

Little Steps — Pre Primary wing of VSA

Subject: Maths　　　Class: 8　　　Topic: Exponents and Powers

Watch video #11 and solve the following exercise:

EXERCISE 4.1

Use **Cordova Smart Class Software** on the **smart board** in class to do Exercise.

1. Write the units digit of the cube of each of the following numbers :
    - (i) 21
    - (ii) 209
    - (iii) 2365
    - (iv) 774
    - (v) 388

2. Find the volume of the cube, if one face of the cube has an area of 121 sq. m.

3. Which of the following numbers are not perfect cubes?
    - (i) 5324
    - (ii) 243
    - (iii) 1728
    - (iv) 2437
    - (v) 3824
    - (vi) 3375
    - (vii) 74088

4. Find the smallest number by which each of the following numbers must be multiplied to obtain a perfect cube :
    - (i) 135
    - (ii) 92
    - (iii) 3267

5. Find the smallest number by which each of the following numbers must be divided to make a perfect cube :
    - (i) 1125
    - (ii) 3087
    - (iii) 8192

6. How many cuboids of sides 6 cm, 3 cm and 6 cm will be needed to form a cube of side 6 cm?

7. What is the volume of a cube having its side 17 cm?

8. Find the cube of the following numbers :
    - (i) 0.05
    - (ii) -6
    - (iii) -0.9
    - (iv) 2.1
    - (v) 0.33
    - (vi) $-5\frac{2}{3}$

9. What number has its cube $\dfrac{512}{2197}$?

10. Which of the following numbers are cubes of rational numbers? Also, find the rational numbers.
    - (i) $\dfrac{343}{729}$
    - (ii) $\dfrac{9261}{10648}$
    - (iii) $\dfrac{1125}{4096}$

EXERCISE 4.2

Use **Cordova Smart Class Software** on the **smart board** in class to do Exercise.

1. Find the cube root of the following numbers by prime factorisation method :
    - (i) 216
    - (ii) 17576
    - (iii) 39304
    - (iv) 54872
    - (v) 21952
    - (vi) 46656

2. Three numbers are in the ratio 2 : 3 : 5. The sum of their cubes is 34560. Find the numbers.

3. Find the cube root of 35937 by using (a) Prime factorisation method (b) Without finding prime factors.

4. Find the cube root of the following numbers without finding prime factors :
    - (i) 157464
    - (ii) 5832
    - (iii) 19683
    - (iv) 13824

5. Evaluate :
    - (i) $\sqrt[3]{\dfrac{1331}{9261}}$
    - (ii) $\sqrt[3]{-3.375}$
    - (iii) $\sqrt[3]{-216} \times \sqrt[3]{-15625}$
    - (iv) $\sqrt[3]{\dfrac{-2197}{4096}}$

6. The volume of a cubical box is 19683 m³. Find its edge.