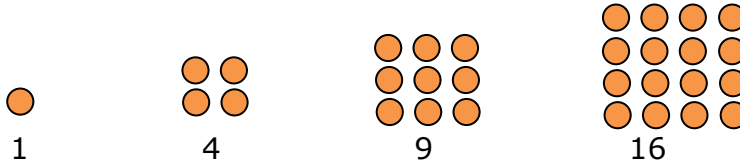


Look at the following arrangements of circles.



What pattern can you see in the numbers 1, 4, 9, and 16?

Here,  $1 = 1 \times 1$     $4 = 2 \times 2$     $9 = 3 \times 3$     $16 = 4 \times 4$

The numbers 1, 4, 9, 16, 25..... are formed by multiplying a number by itself. Such numbers are called **square numbers**.

So,  $1 = 1$     $4 = 2$     $9 = 3$     $16 = 4$     $25 = 5$  .....

1, 4, 9, 16, 25, 36..... are **squares** of 1, 2, 3, 4, 5, 6.....respectively.  
 1, 2, 3, 4, 5 are the **square roots** of 1, 4, 9, 16, 25..... respectively.

We use symbol ' $\sqrt{\quad}$ ' to denote the square root.  
 The symbol is called a **radical**.

The square root of 225 is 15.

i.e.  $\sqrt{225} = \sqrt{5 \times 5 \times 3 \times 3} = 5 \times 3 = 15$

1. Match the following square numbers.

a.

b.

c.

d.

e.

A.

B.

C.

D.

E.

2. Find the square root by using prime factorization.

a) 169

b) 196

c) 900

d) 1,024

3. Solve the following problems.

Extra

i. The square numbers between 1 to 50 are

a. 1, 2, 9, 16, 25, 36, 49

b. 1, 4, 9, 16, 25, 30, 49

c. 1, 4, 9, 16, 25, 36, 49

d. 1, 4, 9, 16, 36, 49

ii. In a garden, we plant flowers in rows and columns.  
If each of the rows and columns have 16 flowers,  
how many flowers are planted in the garden?