# MATHS

# BOOKS - ICSE

# SQUARES AND SQUARE ROOTS

## Example

**1.** Is $196$ a perfect square ?

Watch Video Solution

**2.** Is $180$ a perfect square ?

Watch Video Solution

**3.** Find the square root of $484$.

A. $32$

B. $22$

C. $26$

D. $28$

**Answer: B**

Watch Video Solution

**4.** Find the smallest number by which $980$ be multiplied so that the product is a perfect square.

A. $11$

B. $4$

C. $8$

D. $5$

**Answer: D**

Watch Video Solution

**5.** Find the smallest number by which $3150$ be divided, so that the quotient is a perfect square.

Watch Video Solution

**6.** Find the square root of:

(i) $2\frac{7}{9}$

(ii) $4.41$

Watch Video Solution

**7.** A man plants his orchard with $5625$ trees and arranges them so that there are as many rows as

there are trees in each row. How many rows are there ?

A. $78$

B. $65$

C. $78$

D. $75$

**Answer: D**

Watch Video Solution

**8.** In a basket there are $50$ flowers. A man goes to worship and puts as many flowers in each temple as

there are temples in the city. Thus, he needs 8 baskets of flowers. Find the number of temples in the city.

A. 30

B. 29

C. 20

D. 65

**Answer: C**

Watch Video Solution

**9.** Find the smallest perfect square number, which is divisible by $8$ and $12$.

A. $121$

B. $144$

C. $169$

D. $196$

**Answer: B**

Watch Video Solution

**10.** Find the smallest perfect square number divisible by $24, 30$ and $60$.

A. $3600$

B. $3200$

C. $1600$

D. $2500$

**Answer: A**

Watch Video Solution

**11.** Find the square root of $276676$

Watch Video Solution

**12.** Using the division method find the square root of

:

(i) $4489$

(ii) $46656$

Watch Video Solution

**13.** Using the division method find the square root of

:

(i) $605.16$

(ii) $0.000729$

Watch Video Solution

**14.** Find the square root of $24.729$ correct to two places of decimal.

Watch Video Solution

**15.** Find the square root of :

(i) $3$, correct to three places of decimal.

(ii) $0.07688$, correct to two places of decimal.

Watch Video Solution

**16.** Find the least number that must be subtracted from $2433$ so that the remainder isa perfect square.

Watch Video Solution

**17.** Find the least number which must be added to $18,265$ to obtain a perfect square.

Watch Video Solution

## Exercise 3 A

**1.** Find the square of : $59$

A. 3681

B. 3981

C. 3481

D. 3881

**Answer: C**

Watch Video Solution

**2.** Find the square of :

6.3

Watch Video Solution

**3.** Find the square of :

$15$

Watch Video Solution

**4.** By splitting into prime factors, find the square root of :

$11025$

Watch Video Solution

**5.** By splitting into prime factors, find the square root of :

396900

A. 640

B. 630

C. 360

D. 603

**Answer: B**

Watch Video Solution

**6.** By splitting into prime factors, find the square root of :

194481

A. $321$

B. $421$

C. $441$

D. $299$

**Answer: C**

Watch Video Solution

**7.** (i) Find the smallest number by which $2592$ be multiplied so that the product is a perfect square.

(ii) Find the smallest number by which $12748$ be multiplied so that the product is a perfect square.

Watch Video Solution

**8.** Find the smallest number by which $10368$ be divided, so that the result is a perfect square. Also, find the square root of the resulting number.

Watch Video Solution

**9.** Find the square root of :

$0.1764$

A. $0.48$

B. $0.52$

C. $0.42$

D. $0.62$

**Answer: C**

Watch Video Solution

**10.** Find the square root of :

$96\frac{1}{25}$

Watch Video Solution

**11.** Find the square root of :

$0.0169$

A. $0.23$

B. $0.13$

C. $0.33$

D. $0.43$

**Answer: B**

Watch Video Solution

**12.** Evaluate :

$$\sqrt{\frac{14.4}{22.5}}$$

Watch Video Solution

**13.** Evaluate :

$$\sqrt{\frac{0.225}{28.9}}$$

Watch Video Solution

**14.** Evaluate :

$$\sqrt{\frac{25}{32} \times 2\frac{13}{18} \times 0.25}$$

Watch Video Solution

**15.** Evaluate :

$$\sqrt{1\frac{4}{5} \times 14\frac{21}{44} \times 2\frac{7}{55}}$$

Watch Video Solution

**16.** Evaluate :

$$\sqrt{3^2 \times 6^3 \times 24}$$

Watch Video Solution

**17.** Evaluate :

$$\sqrt{(0.5)^3 \times 6 \times 3^5}$$

Watch Video Solution

**18.** Evaluate :

$$\sqrt{\left(5 + 2\frac{21}{25}\right) \times \frac{0.169}{1.6}}$$

Watch Video Solution

**19.** Evaluate :

$$\sqrt{5\left(2\frac{3}{4} - \frac{3}{10}\right)}$$

Watch Video Solution

**20.** Evaluate :

$$\sqrt{248+\sqrt{52+\sqrt{144}}}$$

Watch Video Solution

**21.** A man, after a tour, finds that he had spent every day as many rupees as the number of days he had been on tour. How long did his tour last, if he had spent in all $Rs.\ 1,296$?

Watch Video Solution

**22.** Out of $745$ students, maximum are to be arranged in the school field for a P.T. display, such that the number of rows is equal to the number of columns. Find the number of rows if $16$ students were left out after the arrangement.

Watch Video Solution

**23.** $13$ and $31$ is a strange pair of numbers such that their squares $169$ and $961$ are also mirror images of each other. Find two more such pairs.

Watch Video Solution

**24.** Find the smallest perfect square divisible by $3, 4, 5$ and $6$.

Watch Video Solution

**25.** If $\sqrt{784} = 28$, find the value of :

(i) $\sqrt{7.84} + \sqrt{78400}$

(ii) $\sqrt{0.0784} + \sqrt{0.000784}$

Watch Video Solution

Exercise 3 B

**1.** Find the square root of :

$4761$

Watch Video Solution

**2.** Find the square root of :

$7744$

Watch Video Solution

**3.** Find the square root of :

$15129$

Watch Video Solution

Watch Video Solution

**4.** Find the square root of :

$0.2916$

Watch Video Solution

**5.** Find the square root of :

$0.001225$

Watch Video Solution

**6.** Find the square root of :

$0.023104$

Watch Video Solution

**7.** Find the square root of :

$27.3529$

Watch Video Solution

**8.** Find the square root of :

$4.2025$

Watch Video Solution

Watch Video Solution

**9.** Find the square root of :

$531.7636$

Watch Video Solution

**10.** Find the square root of :

$0.007225$

Watch Video Solution

**11.** Find the square root of :

$245$ correct to two places of decimal.

Watch Video Solution

**12.** Find the square root of :

496 correct to three places of decimal.

Watch Video Solution

**13.** Find the square root of :

$82.6$ correct to two places of decimal.

Watch Video Solution

Watch Video Solution

**14.** Find the square root of :

$0.065$ correct to three places of decimal.

Watch Video Solution

**15.** Find the square root of :

$5.2005$ correct to two places of decimal.

Watch Video Solution

**16.** Find the square root of :

$0.602$ correct to two places of decimal.

Watch Video Solution

**17.** Find the square root of each of the following correct to two decimal places :

(i) $3\frac{4}{5}$

(ii) $6\frac{7}{8}$

Watch Video Solution

**18.** For each of the following, find the least number that must be subtracted so that the resulting number is a perfect square.

(i) $796$

(ii) $1886$

(iii) $23497$

Watch Video Solution

**19.** For each of the following, find the least number that must be added so that the resulting number is a perfect square.

(i) $511$

(ii) $7172$

(iii) $55078$

Watch Video Solution

**20.** Find the square root of 7 correct to two decimal places, then use it to find the value of $\sqrt{\frac{4+\sqrt{7}}{4-\sqrt{7}}}$ correct to three significant digits.

Watch Video Solution

**21.** Find the value of $\sqrt{5}$ correct to $2$ decimal places, then use it to find the square root of $\frac{3-\sqrt{5}}{3+\sqrt{5}}$

correct to $2$ significant digits.

Watch Video Solution

**22.** Find the square root of :

(i) $\frac{1764}{2809}$

(ii) $\frac{507}{4107}$

(iii) $\sqrt{108 \times 2028}$

(iv) $0.01 + \sqrt{0.0064}$

Watch Video Solution

**23.** Find the square root of $7.832$ corret to :

(i) $2$ decimal places

(ii) $2$ significant digits.

Watch Video Solution

**24.** Find the least number which must be subtracted from $1205$ so that the resulting number is a perfect square.

Watch Video Solution

**25.** Find the least number which must be added to $1205$ so that the resulting number is a perfect square.

Watch Video Solution

**26.** Find the least number which must be subtracted from $2037$ so that the resulting number is a perfect square.

Watch Video Solution

**27.** Find the least number which must be added to $5483$ so that the resulting number is a perfect square.

Watch Video Solution

## Exercise 3 C

**1.** Seeing the value of the digit at unit's place, state which of the following can be square of a number ?

(i) 3051

(ii) 2332

(iii) 5684

(iv) 6908

(v) 50699

Watch Video Solution

**2.** Squares of which of the following numbers will have 1(one) at their unit's place ?

(i) $57$ (ii) $81$

(iii) $139$

(iv) $73$

(v) $64$

Watch Video Solution

**3.** Which of the following numbers will not have 1 (one) at their unit's place ?

(i) $32^2$

(ii) $57^2$

(iii) $69^2$

(iv) $321^2$

(v) $265^2$

Watch Video Solution

**4.** Squares of which of the following numbers will not have 6 at their unit's place ?

(i) 35

(ii) 23

(ii) 64

(iv) 76

(v) 98

Watch Video Solution

**5.** Which of the following numbers will have $6$ at their unit's place :

(i) $26^2$

(ii) $49^2$

(iii) $34^2$

(iv) $43^2$

(v) $244^2$

Watch Video Solution

**6.** If a number ends with $3$ zeroes, how many zeroes will its square have ?

Watch Video Solution

**7.** If the square of a number ends with 10 zeroes, how many zeroes will the number have ?

Watch Video Solution

**8.** Is it possible for the square of a number to end with $5$ zeroes ? Give reason.

Watch Video Solution

**9.** Give reason to show that none of the numbers, given below, is a perfect square.

(i) $2162$

(ii) $6843$

(iii) $9637$

(iv) $6598$

Watch Video Solution

**10.** State, whether the square of the following numbers is even or odd ?

(i) $23$

(ii) $54$

(iii) $76$

(iv) $75$

Watch Video Solution

**11.** Give reason to show that none of the numbers $640$ , $81000$ and $3600000$ is a perfect square.

Watch Video Solution

**12.** Evaluate :

$37^2 - 36^2$

Watch Video Solution

**13.** Evaluate :

$85^2 - 84^2$

Watch Video Solution

**14.** Evaluate :

$101^2 - 100^2$

Watch Video Solution

**15.** Without doing the actual addition, find the sum of:

$1 + 3 + 5 + 7 + 9 + 11 + 13 + 15 + 17 + 19 + 21 + 23$

Watch Video Solution

**16.** Write three sets of Pythagorean triplets such that each set has numbers less than $30$

Watch Video Solution