



# INDIAN SCHOOL AL WADI AL KABIR

Class VIII, Mathematics (2022-23)

## Worksheet DTQ – Squares and Square Roots

### SHORT ANSWER TYPE QUESTIONS- 7 QUESTIONS (2 Marks each)

- Q1.** Answer the following:  
a) Which of the following numbers would end with digit 1?  
 $131^2$ ,  $62^2$ ,  $114^2$ ,  $163^2$ ,  $989^2$   
b) Which of the following numbers would have digit 6 at the unit place?  
 $29^2$ ,  $21^2$ ,  $36^2$ ,  $38^2$ ,  $54^2$ .
- Q2.** How many natural numbers lie between  
(i)  $19^2$  and  $20^2$   
(ii)  $71^2$  and  $72^2$
- Q3.** By prime factorisation check whether 1764 is a perfect square. Find the square root.
- Q4.** From the given numbers, pick out the numbers that can be a perfect square:  
232, 1024, 563, 949, 1087. State reason.
- Q5.**  
i) Find the sum  $1+3+5+7+9+11+13+15+17+19$  without actual addition. State the property of square numbers used.  
ii) Express 144 as a sum of successive odd numbers starting from 1.
- Q6.** A General of army wishing to arrange his 17429 men in the form of a square found that he had 5 men left over. Find the number of men in the front row in this arrangement.
- Q7.** Find the least factor by which 512 must be multiplied to make it a perfect square. Find the square root of the number obtained after multiplication.

### SHORT ANSWER TYPE- 5 QUESTIONS (3 Marks each)

- Q8.** The students of Class VIII of a school donated Rs 1936 in all, for charity Fund. Each student donated as many rupees as the number of students in the class. Find the number of students in the class.
- Q9.** Find the smallest whole number by which 1008 should be multiplied so as to get a perfect square number. Also find the square root of the square number so obtained.
- Q10.** Find the smallest number by which 4704 must be divided so as to get a perfect square. Find the square root of the perfect square obtained.
- Q11.** Find the square of 29 without actual multiplication.
- Q12.** Find the value of  
i)  $\sqrt{96 + \sqrt{2304}}$   
iii)  $\sqrt{31.36}$

**LONG ANSWER TYPE- 3 QUESTIONS (4 Marks each)**

<b>Q.13</b>	3096 students of a school have to be seated on chairs, arranged in equal rows and columns. After they were seated, it was found that some of them did not get a seat. How many students could not be seated and how many rows and columns of chairs were available?
<b>Q14.</b>	Find a Pythagorean triplet i) whose smallest member is 10 ii) one of the members is 15
<b>Q15.</b>	i) Find the least number to be subtracted from 3023 to get a perfect square number. ii) Find the least number added to 2040 to get a perfect square number. Find the square root of the perfect square so obtained.

**ANSWERS**

<b>Q1.</b>	i) $131^2$ and $989^2$ ii) $36^2$ and $54^2$	<b>Q2.</b>	i)38 ii)142	<b>Q3.</b>	Yes, Sq. root= 42
<b>Q4.</b>	1024, 949	<b>Q5.</b>	i) 100 ii) $1+3+5+7+9+11+13+15+17+19+21+23$	<b>Q6.</b>	132
<b>Q7.</b>	2, Sq. root=32	<b>Q8.</b>	44 students	<b>Q9.</b>	7, Sq. root =84
<b>Q10.</b>	6 should be divided. Sq. root =28	<b>Q11.</b>	841	<b>Q12.</b>	i)12 ii)5.6
<b>Q13.</b>	71 students did not get seat. 55 rows and columns	<b>Q14.</b>	i)10, 24, 26 ii) 8,15,17	<b>Q15.</b>	i)107, square root is 54 ii)76, sq.root is 46