

M. Prakash Institute
25 January 2026

STD VIII - Entrance Test 2
Time: 3 hours

Note: Q1 to Q10 are of 2 marks each, Q11 to Q30 are of 4 marks each.

Total Marks: 100

Paper Type:AD

Student Receipt number:

Student Name:

Q1 When $\frac{1}{3}^{\text{rd}}$ of a number is multiplied by $\frac{1}{8}^{\text{th}}$ of the same number, we get 96, find the number.

Q2 Find the value of m^2 :

$$m = \frac{(\sqrt{5} + 2)^2 - (\sqrt{5} - 2)^2}{2}$$

Q3 Simplify and find the value of m :

$$\frac{\frac{7}{2} \div \frac{5}{2} \times \frac{3}{2}}{\frac{7}{2} \div \left(\frac{5}{2} \text{ of } \frac{3}{2}\right)} \div 5.25 = m \div 70$$

Q4 Arun bought some toys at a discount of 20% on the original price. The original price of each toy is Rs 40. If he makes total saving of Rs. 240, how many toys did he buy?

Q5 Observe the pattern.

$$11^2 = 121$$

$$111^2 = 12321$$

$$1111^2 = 1234321$$

And so on.....

Here, if we say, sum of the digits of the number in second row, we mean, sum of the digits of 12321, which is $1 + 2 + 3 + 2 + 1 = 9$.

Find the sum of digits of the number in 8th row.

Q6 The average of 20 numbers is 56. Out of the given numbers, one is 8 more than the other number and average of remaining 18 numbers is 60. Find the larger of the two numbers.

Q7 Find the least number which should be added to 2497 so that the sum is exactly divisible by 5, 6, 4 and 3.

Q8 The ratio of the number of boys and girls in a school of 480 students is 7:5. How many more girls should be admitted to make the ratio 1 : 1 ?

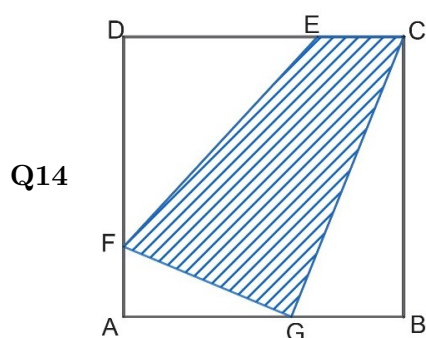
Q9 Find the digit in the unit's place of $(2027)^{2026}$

Q10 $\frac{\sqrt{3} + \sqrt{27}}{\sqrt{2}}$ can be expressed in the form $\sqrt{k}$ where k is an integer. Find the value of k .

Q11 The ratio of two numbers is 4 : 5. If 6 is subtracted from first number and 5 is added to second number the ratio of resulting number is 3 : 5. Find the greater number.

Q12 If $6^{x-y} = 36$ and $3^{x+y} = 729$, then find $x^2 - y^2$

Q13 In 1 hour, A walks twice the distance that B walks. In 5 hours, A walks 6 miles more than what B walks in 8 hours. How many miles does B walk per hour?



$\square ABCD$ is a square. $AF = CE = 4$ cm, $BG = 5$ cm and $BC = 12$ cm. Find the area of the shaded region.

Q15 $a + b = 14$ $ab = 40$ Find $(a - b)^2$.

Q16 If the value of the polynomial $x^4 + 2x^3 - 3x^2 + mx - 11$ at $x = -2$, is 21, then find the value of $(-m)$.

Q17 If 2 men or 3 boys take 40 hours to do a certain piece of work, how long will 4 men and 9 boys working together take to complete the work?

Q18 Interest received from a sum of Rs. 12,250 at the end of 4 years at a certain rate of simple interest is Rs. 840 more than the interest received from another sum of Rs. 21,000 at the end of 2 years at the same rate of simple interest. Find rate percent.

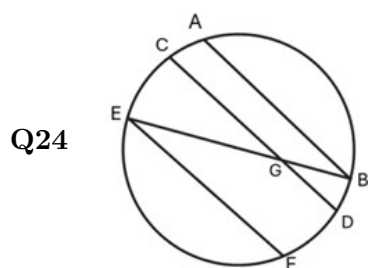
Q19 A bakery sold 18 cakes for Rs. 1840. Profit equivalent to costprice of 5 cakes was made. What was the costprice of each cake?

Q20 A public parking lot has a total parking capacity of 130 vehicles allotted only for cars (4-wheelers) and auto-rickshaws (3-wheelers). On a given day when the parking was full, the total number of wheels were 463. How many auto-rickshaws were parked there?

Q21 Ten years ago father's age was three times that of the son. Ten years hence ratio of father's age to that of son's age would be 7 : 4. Find father's present age.

Q22 In a 8th std class, 22 students play football and 16 students play basketball. There are 5 students who play both the games. How many students are there in this class if everyone of them is playing atleast one game?

Q23 A boat takes 4 hours to travel 60 km upstream and 3 hours to travel 60 km downstream. If the ratio of the speed of boat in still water and the speed of stream is $x : 1$ then $x = ?$



Chords $\overline{AB}$, $\overline{CD}$ and $\overline{EF}$ are parallel to each other.
 $m\angle EGD = 140$. Find $m(\text{arc } ACE)$.

Q25

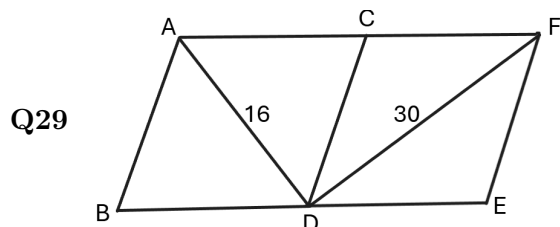
$x = 50$	$y = 10$	$z = 2$
$x = 20$	$y = 4$	$z = 5$
$x =$	$y = 2.5$	$z =$

Study the variation between x and y , & between x and z in the first two rows. Applying the same variation in 3rd row, find the value of $\frac{10(x+z)}{y}$

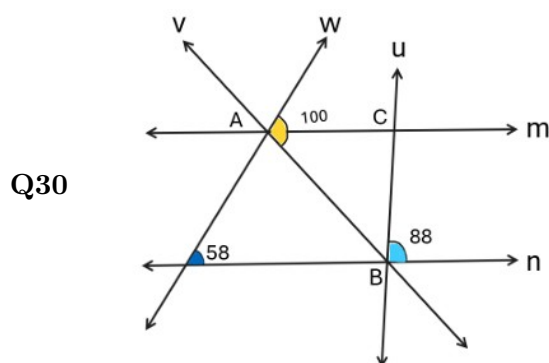
Q26 6 is mean proportion between two numbers x and y and 48 is third proportion to x and y . Find the larger of the two numbers.

Q27 In $\triangle ABC$, if $AB = 12$, $BC = 4\sqrt{3}$, $AC = 8\sqrt{3}$ and if BD is perpendicular to segment AC , Find $2(BD)$.

Q28 Tiya eats 10 panipuries in 3 mins 20 seconds, while Siya eats 16 panipuries in 6 min 40 sec. If they both eat together, then in how many minutes will they finish a box of 108 panipuries?



Two congruent Rhombii are placed alongside as shown in figure. Diagonal AD is 16 units while diagonal $\overline{DF}$ is 30 units. If the Perimeter of the total figure is $3P$, Find P .



Line m is parallel to line n . Lines v , w and m are concurrent at A ; while lines u , v and n are concurrent at B . Find $m\angle ABC$.