



INDIAN SCHOOL AL WADI AL KABIR

Class IX
Mathematics
PRE-MID TERM PAPER

MULTIPLE CHOICE QUESTIONS (1 Mark)

Q.1.	The simplest rationalizing factor of $\frac{1}{\sqrt{8}}$ is							
A	$\sqrt{3}$	B	$\sqrt{12}$	C	$\sqrt{2}$	D	$\sqrt{6}$	
Q.2.	The value of a and b, if $\frac{1}{4-\sqrt{3}} = a + b\sqrt{3}$ is							
A	$a = \frac{4}{13}, b = \frac{1}{13}$	B	$a = \frac{-4}{13}, b = \frac{1}{13}$	C	$a = \frac{1}{13}, b = \frac{4}{13}$	D	$a = 4, b = 1$	
Q.3.	The quotient obtained when $\sqrt{50}$ is divided by 5 is							
A	$\sqrt{5}$	B	$\sqrt{2}$	C	$\sqrt{250}$	D	$\sqrt{25}$	
Q.4.	Which of the following is irrational?							
A	$\sqrt{\frac{16}{9}}$	B	$\frac{\sqrt{12}}{\sqrt{3}}$	C	$\sqrt{7}$	D	$\sqrt{49}$	
Q.5.	The decimal expansion of π is							
A	Non terminating and recurring	B	Terminating	C	Non terminating and non-recurring	D	Non terminating	
Q.6.	The rationalizing factor of $\frac{1-6\sqrt{3}}{1+6\sqrt{3}}$ is							
A	$1 + 6\sqrt{3}$	B	$6 + 1\sqrt{3}$	C	$6 - 1\sqrt{3}$	D	$1 - 6\sqrt{3}$	
Q.7.	Simplify and find the value of $(243)^{\frac{1}{5}}$							
A	7	B	3	C	5	D	9	

Q.8.	The rational number $0.7777777\ldots$ can be written in the form							
	A	$\frac{7}{9}$	B	$\frac{27}{9}$	C	$\frac{77}{9}$	D	$\frac{17}{9}$
Q.9.	Simplify: $(8 + 3\sqrt{5}) \times (8 + 3\sqrt{5})$							
	A	$109 + 48\sqrt{5}$	B	19	C	$109 + 16\sqrt{5}$	D	$19 + 48\sqrt{5}$
Q.10.	Find the value of p if $5^{p-3} = 625$							
	A	15	B	5	C	7	D	21
Q.11.	If $a = 4$ and $b = 3$, then the value of $(a^b + b^a)^{-1}$							
	A	145	B	$\frac{1}{145}$	C	17	D	$\frac{1}{17}$
Q.12.	Simplify $\frac{1}{\sqrt{8}-\sqrt{7}}$ by rationalizing the denominator.							
	A	$4\sqrt{2} - 7$	B	$4\sqrt{2} + 7$	C	$\sqrt{8} - \sqrt{7}$	D	$\sqrt{8} + \sqrt{7}$
Q.13.	The equivalent of $\sqrt{30} \times \sqrt{5}$							
	A	$4\sqrt{6}$	B	$6\sqrt{6}$	C	$4\sqrt{5}$	D	$5\sqrt{6}$
Q.14.	The sum of $4\sqrt{5}$ and $5\sqrt{5}$ is							
	A	$20\sqrt{5}$	B	$9\sqrt{5}$	C	$9\sqrt{10}$	D	$10\sqrt{5}$
Q.15.	Addition of a rational number and an irrational number is							
	A	Rational	B	Irrational	C	Not a real number	D	Both (A) and (B)
Q.16.	Taking $\sqrt{2} = 1.414$, evaluate $\frac{\sqrt{2}}{2} + 11$							
	A	1.707	B	11.414	C	11.707	D	0.707
Q.17.	The value of $4\sqrt{32} \div 3\sqrt{8}$ is							
	A	$\frac{4\sqrt{2}}{3}$	B	$\frac{4}{3}$	C	$\frac{8}{3}$	D	$4\sqrt{8}$

Q.18.	In between two rational numbers there is/are:							
	A	Exactly one rational number	B	Indefinitely many rational numbers	C	No rational numbers	D	Finite rational numbers
Q.19.	On simplifying $9^3 \times 3^4$, we get							
	A	9^{10}	B	9^7	C	3^{10}	D	3^7
Q.20.	A field is in the shape of a rhombus has the perimeter 80 m and one of its diagonals is 20 m. Find the area of the field.							
	A	$100\sqrt{2} m^2$	B	$300\sqrt{2} m^2$	C	$400\sqrt{6} m^2$	D	$200\sqrt{3} m^2$
Q.21.	Find the measure of longest side of the triangular floral design whose sides are in the ratio 6: 5: 9 and its perimeter are 200 m.							
	A	100 m	B	90 m	C	180 m	D	120 m
Fill in the blanks (1mark)								
Q.22.	PART A		The base and hypotenuse of a right-angled triangle are respectively 15 cm and 17 cm, then its area (<i>in cm²</i>) is _____.					
	PART B		The area (<i>in cm²</i>) of an equilateral triangle with side $2\sqrt{3}$ cm is _____.					
	PART C		The area (<i>in cm²</i>) of an isosceles triangle, whose equal sides are of length 4 cm each and third side 6 cm is _____.					
Q.23.	PART A		The decimal form of the rational number $\frac{3}{40}$ is _____.					
	PART B		The value of $\frac{1}{\sqrt[4]{(9)^{-2}}}$ is _____.					
	PART C		On simplifying $(5 + 3\sqrt{5}) + (12 - 3\sqrt{7})$, we get					

CASE STUDY QUESTION

Q.24. A craft mela is organised by Welfare Association to promote the art and culture for tribal people. Fairs and festivals are the custodians of our great cultural heritage. They connect the past glory with the progress of the present and are good source of inter-reaction amongst the people. The pandal is to be decorated by using triangular flags around the field. Each flag has dimensions 25 cm, 25 cm and 22 cm.



(i) The semi-perimeter of the flag for the above mentioned dimensions are

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|----------|-------|----------|-------|----------|-------|----------|-------|
| A | 72 cm | B | 32 cm | C | 36 cm | D | 64 cm |
|----------|-------|----------|-------|----------|-------|----------|-------|

(ii) The area of the flag is

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|----------|---------------------------|----------|---------------------------|----------|---------------------------|----------|----------------------------|
| A | $66\sqrt{2} \text{ cm}^2$ | B | $11\sqrt{7} \text{ cm}^2$ | C | $66\sqrt{7} \text{ cm}^2$ | D | $66\sqrt{14} \text{ cm}^2$ |
|----------|---------------------------|----------|---------------------------|----------|---------------------------|----------|----------------------------|

(iii) The area of cloth required for making 200 such flags are

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|----------|-------------------------------|----------|------------------------------|----------|------------------------------|----------|-----------------------------|
| A | $13200\sqrt{14} \text{ cm}^2$ | B | $1320\sqrt{14} \text{ cm}^2$ | C | $13200\sqrt{2} \text{ cm}^2$ | D | $132\sqrt{14} \text{ cm}^2$ |
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Answers

Answers	1	C	2	A	3	B	4	C
	5	C	6	D	7	B	8	A
	9	A	10	C	11	B	12	D
	13	D	14	B	15	B	16	C
	17	C	18	B	19	C	20	D
	21	B	22	A) 60 B) $3\sqrt{3}$ C) $3\sqrt{7}$	23	A) 0.075 B) 3 C) 17	24	(i) C (ii) D (iii) A