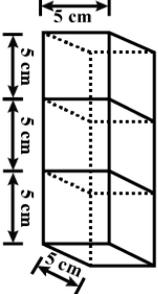
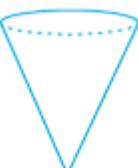
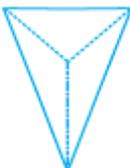


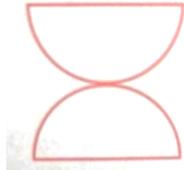
Vikas Bharati Public School
Class: VII (Session: 2024-25)
Subject: Mathematics
Sample Paper

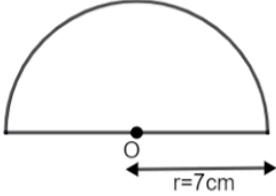
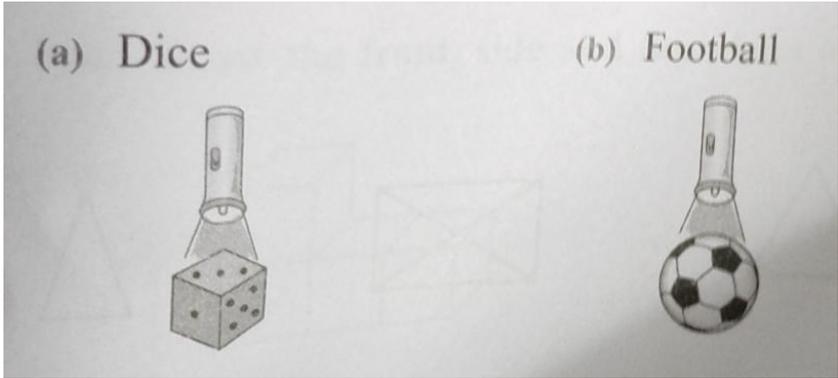
Time: 2 hours 30 minutes

M.M: 60

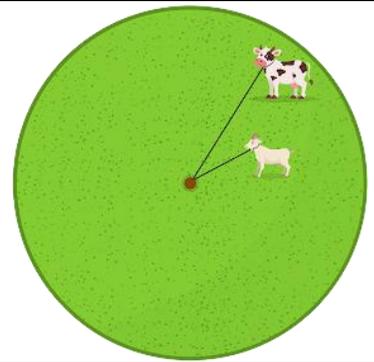
*Note: 1. This question paper contains 5 printed pages and 30 questions.
 2. Read all the questions carefully.*

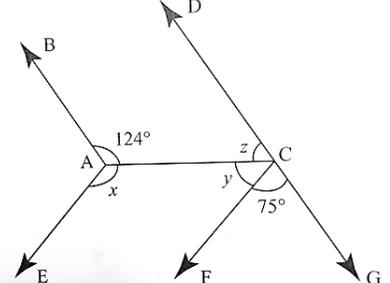
SECTION – A					
All questions are compulsory. In MCQ write the correct option with complete answer.					
Q1.		The three cubes each of edge 5cm are stacked on top of each other. The height of the resulting cuboid would be:		1	
					
		(A) 5cm	(B) 10cm	(C) 15cm	(D) none of these
Q2.		0.075 is equivalent to ____.			1
		(A) 7.5%	(B) 0.75%	(C) 75%	(D) 0.075%
Q3.		Express 13508.84 in standard form.			1
		(A) 13.50884×10^5	(B) 1.350884×10^5	(C) 13.50884×10^4	(D) 1.350884×10^4
Q4.		The order and angle of rotational symmetry for the following figure is:		1	
					
		(A) 1, 360°	(B) 2, 180°	(C) 3, 120°	(D) 4, 90°
Q5.		65 ÷ 0.005 equals			1
		(A) 130	(B) 1300	(C) 13000	(D) 0.13
Q6.		Which of the following 3-dimensional figures has the top, side and front as triangles?			1
		(A) 	(B) 	(C) 	(D) 

Q7.	Terms of the expression $9x^2 - 4xy$ are ____ and ____.				1
	(A) $9x$ and $4xy$	(B) $9x^2$ and $4x$	(C) $9x$ and $4y$	(D) $9x^2$ and $-4xy$	
Q8.	A solid having 6 edges, 4 faces and 4 vertices is:				1
	(A) tetrahedron	(B) cylinder	(C) prism	(D) cone	
Q9.	Which of the following rational number lies between -3 and -1?				1
	(A) $-\frac{1}{2}$	(B) $-\frac{2}{2}$	(C) $-\frac{3}{2}$	(D) $-\frac{6}{2}$	
Q10.	Suppose a shopkeeper has bought 2 kg of mangoes for ₹ 400. And sold it for ₹ 180 per kg to one customer and sold another 1 kg for ₹ 220 to another customer. How much is the shopkeeper's profit or loss?				1
	(A) No Profit, No Loss	(B) Loss of ₹20	(C) Profit of ₹180	(D) Profit of ₹20	
Q11.	Fill in the blanks.				4
	(i)	The cross-sections that we get when we give a vertical cut to this log of wood is _____.			
	(ii)	A triangle with both line and rotational symmetry of order more than 1 is _____.			
	(iii)	Dividing both the sides by 12 in the equation $12l = 72$, we get $l =$ _____.			
	(iv)	The value of the expression $x^2 - y^3$, when $x = 1$ and $y = -2$ is _____.			
Q12.	Do as directed.				4
	(i)	How many lines of symmetry does the following figure have?			
	(ii)	Find the total distance of the journey, if 25% of the journey is 800 km.			
	(iii)	Find height, if the area of a right-angled triangle is 54 cm^2 and base is 12 cm long.			
	(iv)	What will be the answer when 0 is divided by $\frac{4}{3}$?			
Q13.	State true or false. In case false, rewrite the correct statement.				2
	(i)	It is a net of hexagonal pyramid.			
	(ii)	A regular octagon will have 7 lines of symmetry.			

SECTION – B		
Do any 6 questions from Q14 to Q20. Over attempt will not be evaluated.		
Q14.	Can we have a rotational symmetry of order more than 1 whose angle of rotation is 25° . Give reason to support your answer.	2
Q15.	I calculated the perimeter of the adjoining figure as follows. But my teacher marked it wrong. Please help me in correcting my answer. Perimeter of adjoining figure = $\frac{1}{2}$ of Circumference of circle $= \frac{1}{2} \times \pi d$ $= \frac{1}{2} \times \frac{22}{7} \times 14 \text{ cm}$ $= 22 \text{ cm}$	2
		
Q16.	Suhana sells a sofa set for ₹ 9600 making a profit of 20%. What is the C.P. of the sofa set?	2
Q17.	The sum of two rational numbers is $-\frac{3}{5}$. If one rational number is $\frac{3}{4}$, find the other?	2
Q18.	A torch light is lit exactly above the given solids. Name the shape of the shadow obtained exactly below each one. <div style="text-align: center;">  </div>	2
Q19.	The difference in the measures of two complementary angles is 12° . Find the measures of the angles.	2
Q20.	The median of observations 11, 12, 14, 18, $x + 2$, 20, 22, 25, 61 arranged in ascending order is 21. Find the value of x .	2
SECTION – C		
Do any 4 questions from Q21 to Q25. Over attempt will not be evaluated.		
Q21.	Which is a better transaction? (i) Gardening shears bought for ₹250 and sold for ₹325. OR (ii) A cupboard bought for ₹2500 and sold for ₹3000.	3

Q22.		Simplify using laws of exponents: $\frac{26^4 \times 3^5 \times x^7}{(13)^3 \times (6x)^4}$	3															
Q23.		A field in the form of a parallelogram has base 150m and altitude 80m. Find the cost of cultivating the field at the rate of ₹0.75 per m ² .	3															
Q24.		Divide the sum of $\frac{-5}{4}$ and $\frac{11}{3}$ by the product of $\frac{3}{2}$ and $\frac{11}{6}$.	3															
Q25.		In a bag there are 69 balls. Some of which are red and rest are white. If there are 3 less than 5 times the white balls, find the number of each coloured balls in the bag.	3															
		SECTION – D Do any 3 questions from Q26 to Q29. Over attempt will not be evaluated.																
Q26.		Nitin borrows ₹5,40,000 from a finance company to buy his first car. The rate of simple interest is 4% p.a. and he borrows the money for a period of 5 years. Find: i) the amount Nitin must repay the finance company. ii) his equal monthly instalments for the repayment of loan.	4															
Q27.		Given below is the data showing the favourite fast food of boys and girls of class V. <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Fast Food</th> <th>Pizza</th> <th>Noodles</th> <th>Pasta</th> <th>Burger</th> </tr> </thead> <tbody> <tr> <td>Boys</td> <td>25</td> <td>40</td> <td>15</td> <td>25</td> </tr> <tr> <td>Girls</td> <td>30</td> <td>35</td> <td>30</td> <td>45</td> </tr> </tbody> </table> Draw a double bar graph for the given data and answer the following questions: a. Which fast food is liked by most of the students? b. Which fast food is liked by only 45 students?	Fast Food	Pizza	Noodles	Pasta	Burger	Boys	25	40	15	25	Girls	30	35	30	45	4
Fast Food	Pizza	Noodles	Pasta	Burger														
Boys	25	40	15	25														
Girls	30	35	30	45														
Q28.		At the centre of a circular ground, a farmer has tied a cow and a goat with ropes of length 21m and 14m respectively, so that they can move around in circles on the grazing ground.	4															
	(a)	What is the maximum possible area of the grass field to which the cow has access to graze?																
	(b)	What is the maximum possible area of the grass field to which the goat has access to graze?																
	(c)	Which animal has access to more grass to graze and by how much?																



Q29.	In figure, $AB \parallel CD$ and $AE \parallel CF$. find the measure of angles x , y and z .		4
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SECTION – E

In MCQ write the correct option with complete answer.

Q30.	<p>Aarav works in a showroom where shoes are sold. On one day he sold 25 pairs of shoes. He needs to order some more shoes to keep on shelves for display. He decides to work out the shoe sizes and order the most relevant and popular size. The sizes he sold on this day are shown in the table.</p> <table border="1" data-bbox="885 613 1300 1119" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Shoe size</th> <th>Number of pairs of shoes sold out</th> </tr> </thead> <tbody> <tr><td>3</td><td>2</td></tr> <tr><td>4</td><td>6</td></tr> <tr><td>5</td><td>8</td></tr> <tr><td>6</td><td>4</td></tr> <tr><td>7</td><td>2</td></tr> <tr><td>8</td><td>2</td></tr> <tr><td>9</td><td>1</td></tr> </tbody> </table>	Shoe size	Number of pairs of shoes sold out	3	2	4	6	5	8	6	4	7	2	8	2	9	1	
Shoe size	Number of pairs of shoes sold out																	
3	2																	
4	6																	
5	8																	
6	4																	
7	2																	
8	2																	
9	1																	

a)	Find the range of the given data?	1				
	<table border="1" style="width: 100%; text-align: center;"> <tr> <td>(i) 3</td> <td>(ii) 4</td> <td>(iii) 5</td> <td>(iv) 6</td> </tr> </table>	(i) 3	(ii) 4	(iii) 5	(iv) 6	
(i) 3	(ii) 4	(iii) 5	(iv) 6			
b)	Which representative value should Aarav use to order the new lot?	1				
	<table border="1" style="width: 100%; text-align: center;"> <tr> <td>(i) mean</td> <td>(ii) median</td> <td>(iii) mode</td> <td>(iv) none of these</td> </tr> </table>	(i) mean	(ii) median	(iii) mode	(iv) none of these	
(i) mean	(ii) median	(iii) mode	(iv) none of these			
c)	Which shoe size is the most relevant and popular size that Aarav should restock in his showroom?	1				
	<table border="1" style="width: 100%; text-align: center;"> <tr> <td>(i) shoe size 5</td> <td>(ii) shoe size 4</td> <td>(iii) shoe size 6</td> <td>(iv) shoe size 9</td> </tr> </table>	(i) shoe size 5	(ii) shoe size 4	(iii) shoe size 6	(iv) shoe size 9	
(i) shoe size 5	(ii) shoe size 4	(iii) shoe size 6	(iv) shoe size 9			
d)	The frequency of least popular shoe size is:	1				
	<table border="1" style="width: 100%; text-align: center;"> <tr> <td>(i) 1</td> <td>(ii) 2</td> <td>(iii) 4</td> <td>(iv) 6</td> </tr> </table>	(i) 1	(ii) 2	(iii) 4	(iv) 6	
(i) 1	(ii) 2	(iii) 4	(iv) 6			