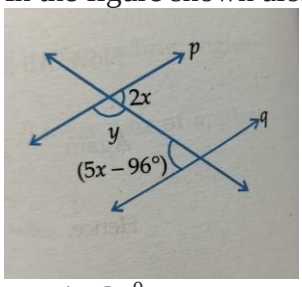
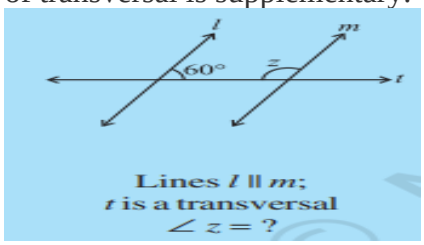
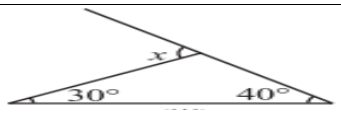
DELHI PUBLIC SCHOOL JAMMU
SESSION (2024-25)
HALF YEARLY EXAMINATION
Sample paper

Class: VII **Time: 3 hours**
Subject: MATHS **Max. Marks: 80**

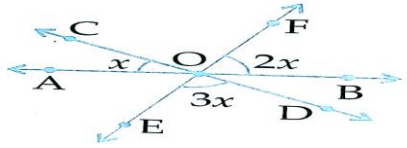
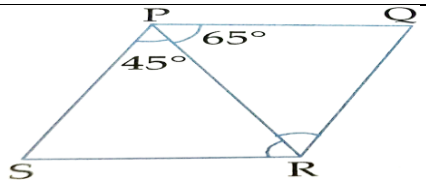
General Instructions:

- All the questions are compulsory.
- The question paper has 5 sections A, B, C, D and E.
- Section A has 20 Multiple Choice Questions (MCQs) carrying 1 mark each.
- Section B has 5 Short Answer-I (SA-I) type questions carrying 2 marks each.
- Section C has 6 Short Answer-I (SA-II) type questions carrying 3 marks each.
- Section D has 4 Long Answer (LA) type questions carrying 5 marks each.
- Section E has 3 Case-Study based questions (4 marks each) with subparts of the values 1, marks each.
- All questions are compulsory. However, an internal choice in 2Qs of 2 marks, 2Qs of 3 marks and 2Qs of 5 marks has been provided.
- Draw neat figures wherever required.

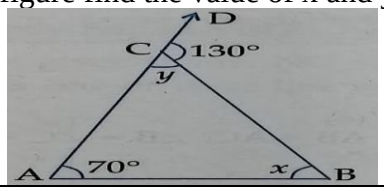
	Section – A **Multiple Choice Questions**	
SN		**Marks**
1	The smallest negative integer is: a) 0 b) -100 c) -1 d) none of these	1
2	The absolute value of -8 is a) 8 b) -6 c) 0 d) none of these	1
3	If 4 + (-7) = (-7) + 4, this property in integers is called a) Closure b) commutative c) Associative d) none of these	1
4	The integer which is its own additive inverse is a) 1 b) -1 c) 0 d) none of these	1
5	The value of 2.2 x 0.2 x 0.001 is equal to a) 4.2 b) 0.00044 c) 4.4 d) 0.0044	1
6	If 256 divided by16 =16 then value of 2.56 divided by16 is equal to a) 1.6 b) 16 c) 0.16 d) 0.016	1
7	The value of product of two proper fractions is always ……than each of the fractions. a) Greater b) equal c) less d) none of these	1
8	The mode of 2,5,1,4,4,6,0,3,3,2,8,2,6,2 is a) 1 b) 2 c) 4 d) 6	1
9	The probability of a sure event is a) 0 b) 1 c) 2 d) none of these	1
10	Which of the following triplets can be the angles of a triangle a)76^0 ,64^0 ,40^0 b) 30^0 ,70^0 ,90^0 c) 56^0 ,60^0 ,60^0 d) 20^0 ,148^0 ,30^0	1

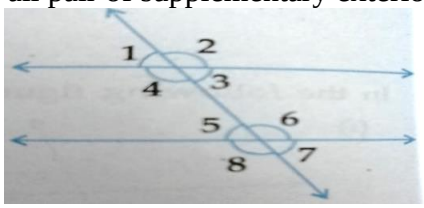
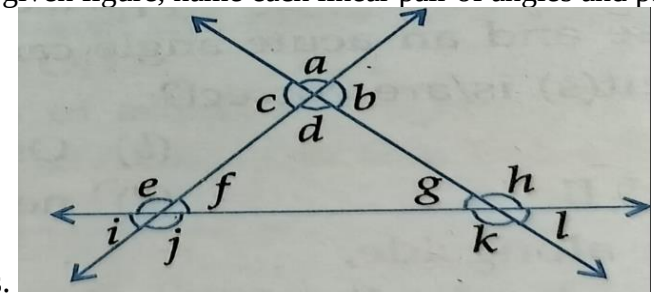
11	The solution of 5x-8 = 9 is a) x = $\frac{3}{5}$ b) x = $\frac{4}{5}$ c) x = $\frac{17}{5}$ d) none of these	1
12	Think of a number. Add 11 to it and divide the sum by 7,the result is 9. The number is a) 23 b) 25 c) 52 d) 49	1
13	One-Fourth of a number is 3 more than One-Fifth of its successor. The number is? a) 46 b) 64 c) 37 d) 66	1
14	The angle which is equal to its complement is? a) 90^0 b) 45^0 c) 65^0 d) 180^0	1
15	Which of the following is a pair of Supplementary Angles? a) 38^0 and 52^0 b) 69^0 and 81^0 c) 84^0 and 96^0 d) 173^0 and 187^0	1
16	In the figure shown alongside lines P and Q are parallel. What is the value of Y?  a) 32^0 b) 64^0 c) 116^0 d) 148^0	1
17	The base angles of an isosceles triangle are a) Equal b) unequal b) in 1:2 d) none of these	1
18	In a right angled ,triangle right angled at B, if AB = 5cm and AC=13cm, then BC is equal to a) 8 cm b) 12 cm c) 10 cm d) 5 cm	1
	(Q19-Q20) <u>Assertion and Reason Based Questions</u> This type of reasoning questions consists of two statements; an assertion (statement of fact) and a reason (explanation for the assertion). You have to determine whether each statement is correct. If both the statements are correct, you have to determine whether the reason supports the assertion. There will be four answer choices for the possible outcomes and you have to select the correct one.	
19	**Assertion (A)**Observe the given figure z + 60^0 = 180^0 **Reason (R) –** The sum of interior angles on the same side of transversal is supplementary.  a) Both A and R are true and R is the correct explanation of A b) Both A and R are true but R is not the correct explanation of A c) A is true but R is false d) A is false but R is true	1
20	**Assertion (A)** **x = 40^0 + 30^0**  **Reason (R) –** Exterior angle of a triangle is equal to sum of interior opposite angles. a) Both A and R are true and R is the correct explanation of A	1

	b) Both A and R are true but R is not the correct explanation of A c) A is true but R is false d) A is false but R is true	

	Section-B	
21	Rekha wants to find the average age of her family members. So she writes the age of her family members as : 32,30,23,19,15. What is the average age of members in her family?	2
22	The product of two numbers is -182. If one of the integer is13.Find the other integer. **OR** An integer, when multiplied by 4 and then divided by 9 becomes (-28). Find the integer.	2
23	Simplify: 68.5 - 21.45 + 26.2 - 13.46 **OR** Simplify: $5\frac{1}{6} - 3\frac{1}{4} + 2\frac{1}{3}$	2
24	**F**ind the value of x.  .	2
25	 . In the given figure, PQ ‖ SR and SP ‖ RQ. If ∟QPR = 65 AND ∟SPR=45, Find ∟SRQ.	2

	Section-C	
26	The marks obtained by 20 students in an examination are as under: 20,35,35,20,38,40,39,38,39,38,40,39,41,42,41,42,43,48,39,42 Find the median and mode of marks. **OR** Mean of 6 numbers is 17. It was found out later that 21 was wrongly written as 12.Find out the correct mean of the observations.	3
27	Solve for the value of x 3 (x - 1) + 2 (2x + 3) = 7 **OR** The highest marks obtained by a student in the class is thrice the lowest marks plus 9. The highest score is 84.What is the lowest score?	3
28	If the cost of a pencil is ₹ $6\frac{1}{3}$, how many pencils can be purchased for ₹ $126\frac{2}{3}$?	3
29	Find the area of rectangular field whose length is 158.50 m and breadth is 40.5 m..	3

30	A bird is flying at the height of 750 m above the lake surface. At a particular point it is exactly above a fish swimming 120 m below the lake surface. What is the vertical distance between the bird and the fish?	3
31	In the given figure find the value of x and y: 	3

	Section-D	
32	The result of pass percentage of class X and XII in CBSE examination for 5 years are given in the following table: YEAR | 2005-06 | 2006-07 | 2007-08 | 2008-09 | 2009-10 X | 75 | 95 | 90 | 85 | 96 XII | 80 | 85 | 90 | 95 | 98 Draw the double bar graph to represent the data using appropriate scale.	5
33	Two parallel lines are cut by a transversal. i) Write all pair of Vertically opposite angles. ii) Write all pair of linear pairs. iii) Write all pair of corresponding angles. iv) Write all pair of alternate interior angles. v) Write all pair of supplementary exterior angles on the same side of transversal  . **OR** In the given figure, name each linear pair of angles and pair of vertically opposite angles. 	5
34	The sum of four consecutive odd numbers is128. Find the numbers.	5
35	A tree is broken at a height of 5m from the ground and its top touches the ground at adistance of 12 m from the base of tree.Find the original height of the tree. **OR** The diagonals of a rhombus are 30 cm and 16 cm.Find its perimeter.	5

	Section-E **Case Study based Questions**	

36	Take the data giving the minimum and the maximum temperature of various cities given in the table given below and answer the following questions: **Temperatures of Cities as on 20.6.2006** **City** — **Max.** — **Min.** Ahmedabad — 38°C — 29°C Amritsar — 37°C — 26°C Bangalore — 28°C — 21°C Chennai — 36°C — 27°C Delhi — 38°C — 28°C Jaipur — 39°C — 29°C Jammu — 41°C — 26°C Mumbai — 32°C — 27°C (i) Which city has the largest difference in the minimum and maximum temperature on the given date? a) Jammu b) Ahmedabad c) Amritsar d) Chennai (ii) Which is the hottest city and which is the coldest city? a) Jaipur, Mumbai b) Jammu, Bangalore c)Delhi, Jammu d) Jammu, Delhi (iii) Name a city where maximum temperature of one was less than the minimum temperature of the other two cities. a) Bangalore b) Jaipur c) Ahmedabad d) none of these (iv) Name the city which has the least difference between its minimum and the maximum temperature. a) Bangalore b) Mumbai c) Delhi d) Amritsar	4
37	A triangle is a three sided polygon, and its properties are interesting to understand. To ensure that students have thoroughly grasped the triangles here are few questions bases on triangles i) Sum of interior angles of a triangle is a) 160^0 b)180^0 c)190^0 d) 200^0 ii) Median refers to the line segment joining the vertex of a triangle to the mid - point of side opposite to it.so in a triangle we can draw-- a) 2 medians b) 3 medians 4) only one median d) none of these iii) If a side of a triangle is produced, then the measure of exterior angle so formed is equal to the measure of a) sum of two interior opposite angles b) any one of interior angle c) half of sum of angles of triangle d) none of these iv) What is the measure of interior angles of an equilateral triangle. a) 80^0 b) 70^0 c)60^0 d) 90^0	4
38	A man travelled two fifth of his journey by train, one third by bus, one fourth by car and the remaining 3 km on foot. What is the length of his total journey? i) The length of his total journey is a) 280 km b) 108 km c) 180 km d) 200 km ii) The length of journey covered by train is a) 72 km b) 108 km c) 76 km d) 82 km iii)The length of journey covered by bus is a) 70 km b) 60 km c) 120km d) 80km iv) The length of journey covered by car is a) 35 km b) 55 km c) 65 km d) 45 km	4

Reflection Box						
1. How confident do you feel about your understanding of the topics covered in this assessment?	A) Very Confident		B) Somewhat Confident		C) Not Confident	
2. How well do you think you prepared for this assessment?	A) Very Well		B) Somewhat Well		C) Not Well	
3. What do you think you could have done differently to improve your performance on this assessment?	A) Studied thoroughly		B) Practiced more		C) Asked for help from the teachers or peers.	

20,35,35,20,38,40,39,38,39,38,40,39,41,42,41,42,43,48,39,42