



ATOMIC ENERGY CENTRAL SCHOOL
RAWATBHATA

Class 07 - Mathematics
MATHEMATICS

Maximum Marks: 80

Time Allowed: 3 hours

General Instructions:

The question papers consists of 30 questions divided into four sections A, B, C and D.

- 1) Section A comprises 6 questions of 1 mark each
- 2) Section B comprises 6 questions of 2 marks each
- 3) Section C comprises 10 questions of 3 marks each
- 4) Section D comprises 8 questions of 4 marks each

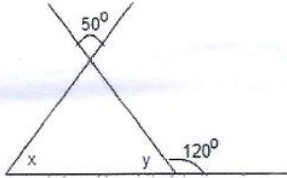
All questions are compulsory

Section A

1. $45 \div (-3) = \underline{\hspace{2cm}}$ 1
 - a) 48
 - b) 15
 - c) -15
 - d) -48
2. A vehicle covers a distance of 43.2 km in 2.4 litres of petrol. How much distance will it cover in one litre of petrol? 1
 - a) 21km
 - b) 24km
 - c) 18km
 - d) 20km
3. Identify which of the following pairs of angles are supplementary. 1
 - a) $112^\circ, 68^\circ$
 - b) $63^\circ, 27^\circ$
 - c) $45^\circ, 45^\circ$
 - d) $80^\circ, 10^\circ$
4. When a die is thrown, what are the six possible outcomes? 1
 - a) 1, 3, 5
 - b) T, H
 - c) None of these
 - d) 1, 2, 3, 4, 5, 6
5. Find: $3.61 \div 0.19 = \text{---}$ 1
 - a) 190
 - b) 18
 - c) 19
 - d) 17
6. One of the acute angle of a right triangle is 36° , then the other acute angle is 1
 - a) 64°
 - b) 54°
 - c) 44°
 - d) None of these

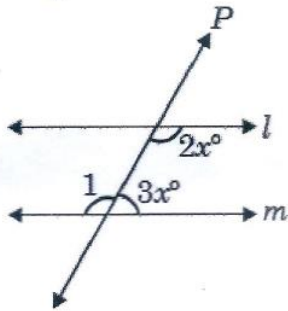
Section B

7. Solve: $6(3x - 4) - 4(2x - 5) = 30$ 2
8. Simplify: $12 - 3\frac{1}{2}$ 2
9. Find the median of first nine even natural numbers. 2
10. Two angles of a linear pair are in the ratio 2 : 7, find the angles. 2
11. Verify commutative property of multiplication if $a=2$ and $b=(-8)$. 2
12. Find the value of x and y in figure. 2

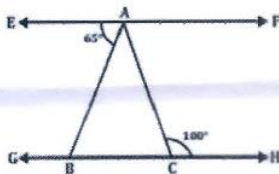


Section C

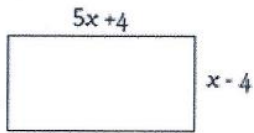
13. Sachin scored twice as many runs as Rahul. Together, their runs fell two short of a double century. How many runs did each one score? 3
14. If $l \parallel m$ and P is a transversal, find $\angle 1$. 3



15. The sum of two rational numbers is -8. If one of the number is -18, find the other number. 3
16. A carton contains 40 boxes of nails and each box weighs $3\frac{3}{4}$ kg. How much would a carton of nails weight? 3
17. State and explain SAS congruence criterion. 3
18. Find the area of a square field if its each side is $10\frac{3}{4}$ m long. 3
19. In the figure below, $EF \parallel GH$, $\angle EAB = 65^\circ$ and $\angle ACH = 100^\circ$, then find $\angle ABC$. 3



20. Find $(x-y) \div (x+y)$ if $x=5$ and $y=(-15)$. 3
21. A wire of length $12\frac{1}{2}$ m is cut into 10 pieces of equal length. Find the length of each piece. 3
22. Find the length and breadth of a rectangle given below, if its perimeter is 72m. 3



Section D

23. A cement company earns a profit of Rs.10 per bag of white cement sold and a loss of Rs.5 per bag of grey cement sold. 4

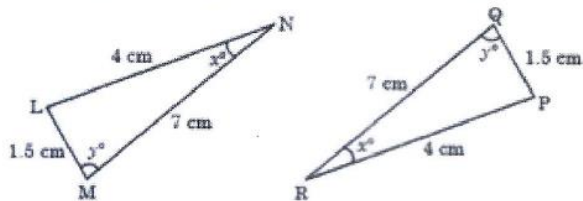
- The company sells 3,000 bags of white cement and 5,000 bags of grey cement in a month. What is its profit or loss?
- What is the number of white cement bags it must sell to have neither profit nor loss, if the number of grey bags sold is 7,200 bags.

24. The table below compares the population(in hundreds) of 5 towns over 2 years. 4

Towns	Red	Golden	Pink	Yellow	Brown
2007	2400	4900	3200	2800	3500
2008	3800	5500	2700	2900	2980

- In which town was the population growth maximum?
- What is the average population of Brown?
- For which city has the population minimised in 2008? What is the percentage of decrease?

25. On the basis of the measurements of following triangles, find the corresponding sides and corresponding angles 4



26. The length of a rectangle is 6m less than 3 times its breadth. If the perimeter is 148m, find its length and breadth. 4

27. The following table shows the average intake of nutrients in calories by rural and urban groups in a particular year. Using a suitable scale for the given data, draw a double bar graph to compare the data 4

Foodstuff	Rural	Urban
Pulses	35	49
Leafy vegetables	14	21
Fruits	35	66