

**INTERNATIONAL INDIAN SCHOOL - DAMMAM  
ANNUAL EXAMINATION - MARCH 2009**

CLASS : VII  
SUBJECT: MATHEMATICS

MAX.MARKS:100  
TIME :3 hrs

SET - A

Instructions:

1. There are 25 questions in this paper divided into 3 sections.
2. All questions are compulsory. However, there is internal choice in every section.

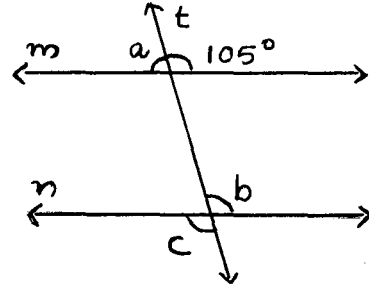
SECTION - A

(Each question carries 3 marks )

1. Find 5 rational numbers between  $\frac{-1}{3}$  and  $\frac{-3}{7}$ .

2. From the sum of  $4x^2 - 6x + 3$  and  $-4x^2 - 7x + 5$ , subtract  $3x^2 - 8x + 6$ .

3. In the adjoining figure,  $m \parallel n$  and  $t$  is a transversal. Find the values of  $a, b, c$ .

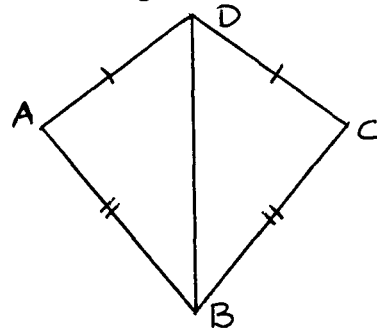


4. Construct a right triangle whose hypotenuse is 9cm and one of the legs is 6 cm long.

5. An elevator descends into a mine shaft at the rate of 5metre per minute

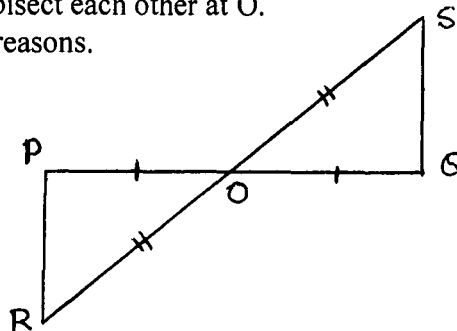
- a) What will be its position after one hour
- b) If it begins to descend from 15 metres above the ground, what will be its position after one hour ?

6. In the figure,  $AD = CD$  and  $AB = CB$ . Is  $\triangle ABD \cong \triangle CBD$ ? why or why not?



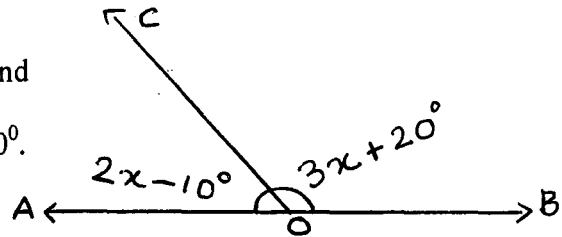
(OR)

In the figure, PQ and RS bisect each other at O. Is  $\triangle POR \cong \triangle QOS$ . Give reasons.



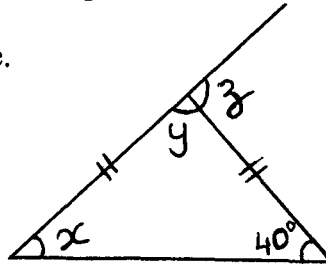
7. 46% of the students in a school are girls. If there are 552 girls, find the number of boys in the school.

8. In the given figure, AOB is a straight line and the ray OC stands on it.  
If  $\angle AOC = 2x - 10^\circ$  and  $\angle BOC = 3x + 20^\circ$ .  
Find the value of x.



9. The area of a square and a rectangle are equal. If the side of the square is 40 cm and the breadth of the rectangle is 25 cm, find the length of the rectangle.

10. Find the value of x, y and z in the given figure.



**SECTION B**  
**( Each question carries 4 marks )**

11. Solve :  $9 + 3(4t + 1) = 36$

12. A man purchased an article at Rs.575 and sold it at a profit of 16%. Find the profit and the selling price of the article.

13. a) If  $a = (-9)$ ,  $b = (-6)$ , Show that  $(a - b) \neq (b - a)$ .

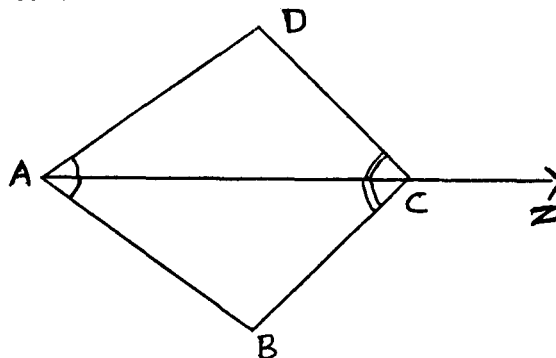
b) In a class test (+5) marks are given for every correct answer and (-2) marks are given for every incorrect answer. Arun answered all the questions and scored (-12) marks though he got 4 correct answer. How many incorrect answers had he attempted.

14. Simplify :  $\left[ \frac{-6}{25} \times \frac{50}{24} \right] \div \left[ \frac{5}{3} - \frac{1}{2} \right]$

15. In the figure ,ray AZ bisects  $\angle DAB$  as well as  $\angle DCB$ .

a) Is  $\triangle DAC \cong \triangle BAC$ ? Give reasons.

b) Is  $CD = BC$ ? Justify.



16. From a circular sheet of radius 10 cm, a circle of radius 4 cm is removed. Find the area of the remaining sheet. (Take  $\pi = \frac{22}{7}$ )

(OR)

One side of a parallelogram is 20cm and the corresponding altitude is 12cm. Find the length of the adjacent side of the parallelogram if the height of the altitude to the adjacent side is 10cm.

17. a) Simplify the expression and find its value when  $x = (-2)$  (2+2)  
 $7(x + 2) - (4 - x)$

b) How much does  $9m^2 + 7m - 2$  exceed  $4m^2 + 3m + 1$ .

18. Construct  $\triangle XYZ$  in which  $XY = 5$  cm,  $\angle X = 30^\circ$  and  $\angle Z = 50^\circ$

19. The length of the diagonal of a rectangle is 15m. If its longer side measures 12 m, find the perimeter of the rectangle.

20. a) Is it possible to have a right triangle with sides 4cm, 3cm, 6cm.  
 b) One of the angles of a triangle is  $100^\circ$  and the other two are equal. Find the measure of each of the equal angles.

**SECTION C**  
**( Each question carries 6 marks )**

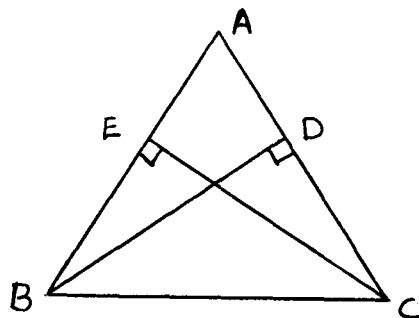
21. Simplify and express in exponential form. (3+3)

a)  $\frac{12^4 \times 9^3 \times 4}{6^3 \times 8^2 \times 27}$

b)  $1225 \times 392$

22. In the figure, BD and CE are altitudes of  $\triangle ABC$ , such that  $BD = CE$ .

- a) State the three pairs of equal parts in  $\triangle CBD$  and  $\triangle BCE$ .  
 b) Is  $\triangle CBD \cong \triangle BCE$ ? Why or why not?  
 c) Is  $CD = BE$ ? Give reasons.  
 d) Is  $\angle DCB = \angle ECB$ ? Why?



23. Two cross-roads, each of width 5m, run at right angles through the centre of a rectangular park of length 70m and breadth 45m and parallel to its sides. Find the area of the roads. Also find the cost of planting grass on the remaining portion of the park excluding cross roads at the rate of Rs20 per m<sup>2</sup>. (3+3)
24. a) A sum of Rs8000 is borrowed at the rate of 5% p.a for 3years. Calculate the interest and the amount to be paid at the end of 3years.
- b) The price of a car increases from Rs 2,25,000 to Rs 2,56,500. What is the increase percent.
25. The number of electric bulbs sold in a shop during a week is as follows:

Days of the week	saturday	sunday	monday	tuesday	Wednesday
No: of electric bulbs sold	250	175	100	200	125

Construct a bar graph for the above information

- a) On which days was the sale more than 200?  
 b) On which days the sale was less than 150?

(OR)

For class X, the results of pre-board examination and annual examination for different years is shown in the following table. Draw a double bar graph for the same.

Year	2004	2005	2006	2007	2008
Pre board examination	60%	60%	68%	70%	75%
Annual examination	85%	80%	92%	95%	100%