INTERNATIONAL INDIAN SCHOOL DAMMAM

SUMMATIVE ASSESSMENT – II – MARCH 2014

Class : VII **Max. Time : 3 Hrs**

Subject : Mathematics **Max. Marks : 90**

SET B

Instructions:

(a) Attempt all questions.
(b) Section A: Questions 1–8 carry 1 mark each.
(c) Section B: Questions 9–14 carry 2 marks each.
(d) Section C: Questions 15–24 carry 3 marks each.
(e) Section D: Questions 25–34 carry 4 marks each.
(f) Internal choice is given in Section B, C & D.

SECTION – A (1 x 8 = 8)

Choose the correct answers from the choices given below:

1. The solution of $2x - 1 = -3$ is
   (a) -1 (b) -4 (c) 0 (d) 1

2. The value of $(3^0 + 5^0)(5^0 + 3^0)$ is
   (a) 2 (b) 0 (c) 4 (d) 3

3. $\Delta PQR \cong \Delta ZXY$, which of the following is true?
   (a) $\overline{PQ} = \overline{XY}$ (b) $\overline{QR} = \overline{XY}$ (c) $\angle P = \angle X$ (d) $\angle Q = \angle Y$

4. The area of a parallelogram whose base 8 cm and the corresponding altitude 6 cm is
   (a) 68 sq.cm (b) 86 sq.cm (c) 24 sq.cm (d) 48 sq.cm

5. The measure of the angle which is equal to its supplement is
   (a) 30^0 (b) 45^0 (c) 60^0 (d) 90^0

6. The perpendicular line segment from a vertex of a triangle to its opposite side is called _____.
   (a) hypotenuse (b) leg (c) altitude (d) median

7. The probability of getting a vowel from a, e, i, o, u is
   (a) 0 (b) 1/6 (c) 1/5 (d) 1

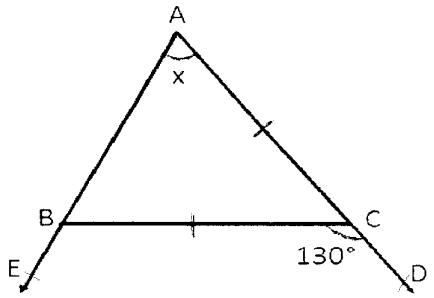
8. The constant term in the expression $-3x^2 + 2x - 5$ is
   (a) -3 (b) 2 (c) -5 (d) -1

SECTION – B

(2 x 6 = 12)

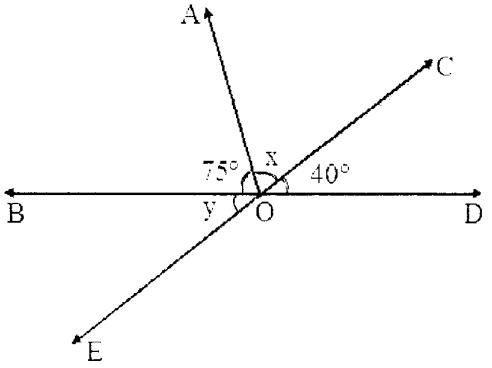
9. Find the height of a triangle whose area is $60cm^2$ and base is 12cm.

10. In the figure, AC = BC. Find the value of x. Give reason in support of your answer.



11. Find the arithmetic mean of the data:
55, 48, 80, 68, 43 and 42.

12. From the figure, find the values of x and y.



13. Frame an equation and solve.
x taken away from 13 gives 20.
OR
10 less than twice a number is 50.

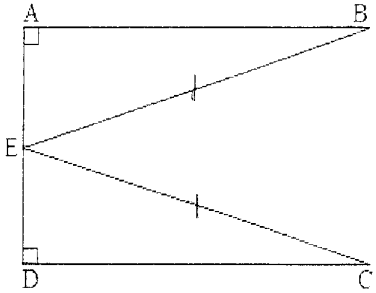
14. Is it possible to have a triangle with the sides 3cm, 4cm, 5cm? Give reason.

SECTION – C

(3 x 10 = 30)

15. (a) Write 5985.3 in standard form.
(b) Write the number from the expanded form.
$9 \times 10^5 + 5 \times 10^2 + 3 \times 10^1$.
(c) Find the value of $(-1)^2 \times (-7)^3$.

16. In the figure, BE = CE. A and D are right angles. E is the mid-point of AD.
(i) State the three pairs of equal parts in Δ BAE and Δ CDE
(ii) Is Δ BAE ≅ Δ CDE? Give reason.
(iii) Is AB = DC? Why or why not?



17. If the circumference of a circular sheet is 88m, find its radius. Also find the area of the sheet. ($\pi = 22/7$)

18. A tree is broken at a height of 5m from the ground and its top touches the ground at a distance of 12m from the base of the tree. Find the original height of the tree.

OR

The diagonals of a rhombus measure 12cm and 16cm. Find its perimeter.

19. Express 135 x 125 as product of prime factors in exponential form.

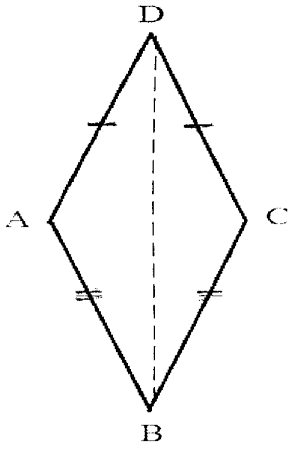
20. Add: $9m - 4nm$, $4mn - 3 + 8n$, $m - 12$.

21. Solve: $14 + 5(x - 1) = 34$.

22. Find the range, median and mode of 73, 84, 70, 82, 69, 76 and 84.

23. Among two supplementary angles, the measure of the larger angle is 46^0 more than the measure of the smaller. Find their measures.

24. In the fig. AD = CD and AB = CB
    (i) State the 3 pairs of equal parts in Δ ABD and Δ CBD
    (ii) Is Δ ABD $\cong$ Δ CBD? Why or why not?
    (iii) Does BD bisect $\angle$ABC? Give reason.

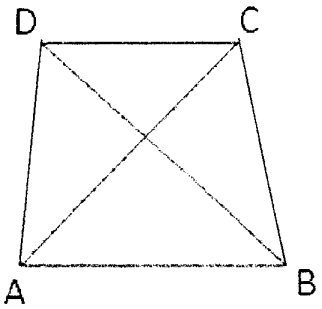


SECTION – D

(4 x 10 = 40)

25. 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.

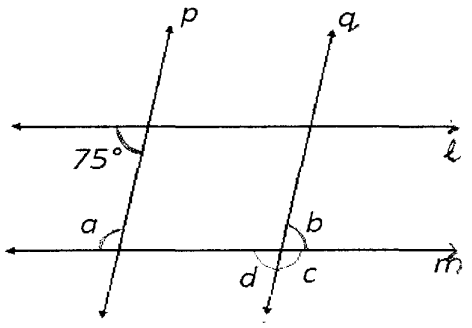
26. ABCD is a quadrilateral. Is AB + BC + CD + DA > AC + BD?



27. Sandeep's father's age is 5 years more than three times Sandeep's age. Find Sandeep's age, if his father is 44 years old.

28. From the sum of $3x - 2y - 5$ and $7x + 3y - 2$, subtract the sum of $5x + 3y - 1$ and $-4x + 4y + 5$.

29. Line $\ell \parallel m$ and $p \parallel q$. Find the values of a, b, c and d.



30. A rectangular park is 45m long and 30m wide. A path 2.5m wide is constructed outside the park. Find the area of the path.

OR

A wire is in the shape of a square of side 10cm. If the wire is rebent into a rectangle of length 12 cm, find its breadth. Which encloses more area, the square or the rectangle?

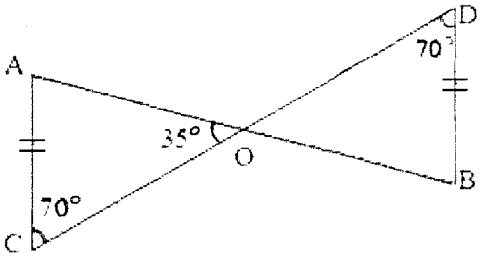
31. Simplify the expression and find its value when $x = -2$, $y = 3$.

$$2(x^2 + 2xy) + 5 - xy$$

32. In the figure, AC = BD and $\angle C = \angle D$. With the help of congruence criterion,

(i) Show that $\Delta AOC \cong \Delta BOD$.

(ii) Is OC = OD? Give reason.



33. Simplify using laws of exponents and mention the laws used.

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

34. The number of girls and boys in the various clubs of a school are given below.

Name of Club	Debating	Hindi	Maths	Music	Theatre
Number of Girls	35	30	25	20	15
Number of Boys	25	15	20	30	35

Draw a double bar graph to represent the above data choosing appropriate scale.