INTERNATIONAL INDIAN SCHOOL-DAMMAM

SUMMATIVE ASSESSMENT - II- MARCH 2013

Class : VII **Time : 3 Hrs.**
Subject : Mathematics **Max.Marks : 90**

SET-B

Instructions:

(a) Attempt all questions.
(b) Section A: Questions 1-8 carry 1 marks 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)**

(Choose the correct answers from the choices given below)

1. The perpendicular line segment from a vertex of a triangle to its opposite side is

a) hypotenuse b) altitude c) median d) leg

2. When a die is thrown, the probability of getting a prime number is

a) 2/3 b) 1/2 c) 1/3 d) 0

3. Numerical coefficient of x in $2x^2-5x+6$ is

a) −2 b) 2 c) 5 d) −5

4. Two angles of a triangle are equal and the third angle is 86° , then one of the angle is

a) 94° b) 47° c) 42° d) 43°

5.The standard form of 6726.5 is

a) 6.7265×10^3 b) 6.7265×10^{-3} c) 6.7265×10^4 d) 6.7265×10^{-4}

6.The equation corresponding to the statement the sum of 5 times a number and 2 is 60

a) 5x+2=60 b) 5−2x =60 c) 5x−2=60 d) 2x+5=60

7. Circumference of a semicircle with radius r is

a) $2\pi r$ b) πr c) r^2 d) $2r+\pi r$

8. If <D=<M and <F= <P, then to prove Δ DEF ≅ Δ MNP by ASA congruence rule , the addional information needed is

a) MN=DF b) EF=NP c) DF=MP d) DE=MN

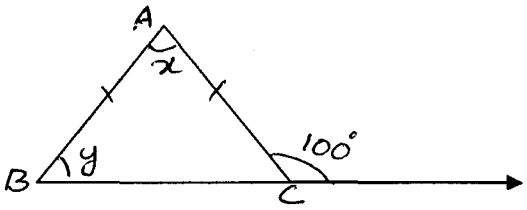
SECTION B (2 x 6)

9. Find the arithmetic mean of the data:

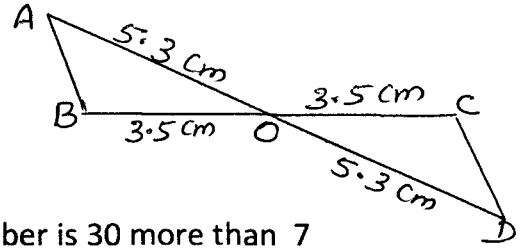
26, 18, 19, 29, 31, 7, 30, 15 , 32

10. Write exponential form for 9 x 9 x 9 x 9 taking base as 3

11. From the figure: find angles x and y



12. In figure ,Is $\Delta OAB \cong \Delta ODC$ by sas congruence condition? If yes, state the three facts to support your answer.



13. Find the number such that one fourth of the number is 30 more than 7

14.The circumference of a circle is 31.4 cm. Find the radius and area of the circle .

(Take π =3.14)

OR

A circle of radius 2 cm is cut from a square piece of an aluminium sheet of side 6 cm. What is the area of the left over aluminium sheet ?(Take π =3.14)

SECTION C (3 x 10)

15. Solve: $15 - 3(x+1) = 6$

16. Find the range, median and mode of 17, 26, 24, 12, 30, 18, 14, 20, 12

17. A ladder 25 m long reaches a window of a building 20m above the ground.Determine the distance of the foot of the ladder from the building.

18. A wire is in the shape of a rectangle.Its length 6cm and breadth is 22 cm.If the same wire is rebent in the shape of a square, what will be the measure of each side ? Also, find which encloses more area ?

19.Write the terms and factors of $-xy+ 2x^2- 3y^2$ by tree diagram

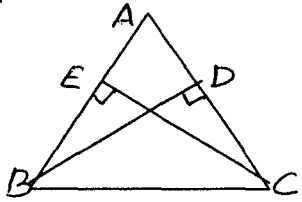
OR

What should be the value of k if $-2x^2+ 5x+ k$ is -3 when $x= -1$

20. Find the value of (i) $(6^0 \div 7^0)^2 + (8^0 - 7^0)^2$

(ii) $(-3)^2 \times (-2)^3 \times (-1)^2 \times 2^0$

21. In figure , ABC is a triangle in which BD=CE , BD and CE are perpendiculars to AC and AB respectively.



(i) state three pairs of equal parts in Δ CBD and ΔBCE

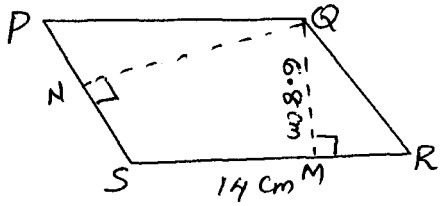
(ii) Is ΔCBD ≅ ΔBCE ?Give reason.

22. Express 216 x 192 as product of prime factors in exponential form

23. a) Solve $7m + \frac{19}{2} = 13$

b) Construct two equations starting with x= −3

24. In fig: PQRS is a parallelogram.QM is the height from Q to SR and QN is the height from Q to PS. If SR=14 cm and QM = 6.8 cm , find



a) the area of the parallelogram PQRS

b) QN if PS= 8 cm

SECTION D

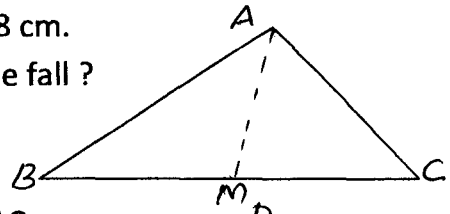
25. Simplify using laws of exponents : **(4 x 10)**

$$\frac{64 \times 3^3 \times 12^2}{6^2 \times 2^3 \times 27}$$

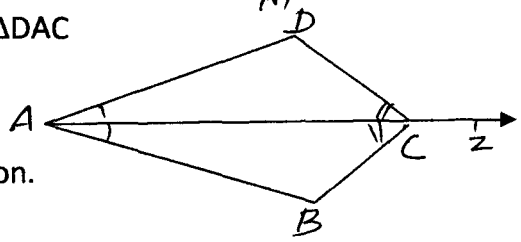
26. From the sum of $4 + 3x^2 + 5x$ and $-4x + 2x^2 + 7$, subtract the sum of $-3x^2 - 5x + 2$ and $x^2 - 2x + 3$

27. a) In fig: AM is the median of a triangle ABC. Prove that AB + BC + CA > 2AM

b) The lengths of two sides of a triangle are 5 cm and 8 cm. Between which two numbers can length of third side fall ?



28. In fig: ray AZ bisects <DAB as well as <DCB



(i) State three pairs of equal parts in ΔBAC and ΔDAC

(ii) Is ΔBAC ≅ΔDAC? Give reason.

(iii) Is AB=AD ? Why or why not?

(iv) If <B=100°, find the measure of <D.Give reason.

29. The diameter of a car tyre is 70 cm.Find the distance covered by it in 5 rounds.Also find the number of turns required to cover a distance of 1540 m.(Take $\pi = \frac{22}{7}$)

30. (i) Arun's father's age is 3 years less than 5 times Arun's age.Find Arun's age , if his father is 47 years old.

(ii) Write the equation 2p +5=30 in statement form.

OR

The length of a rectangle is 18 cm more than its breadth.If its perimeter is 84 cm,find the length and breadth

31. Through a rectangular field of length 112 m long and breadth 100 m wide ,two roads are constructed which are parallel to the sides and cut each other at right angles through the fields.If the width of each road is 5 m , find

(i) area covered by the roads

(ii)the cost of constructing the roads at the rate of Rs. 115 per m^2

32. a) Simplify the expression and find its value when a=3 and b=−2

$2(a^2-ab)+3-ab$

b) If p= −10, find the value of p^3-100

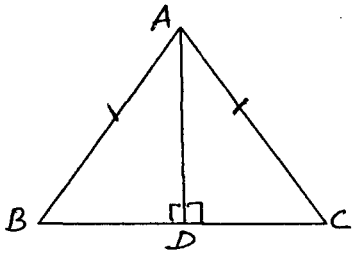
33.In fig: AB=AC and AD is one of its altitudes

(i) State three pairs of equal parts in Δ ADB and Δ ADC

(ii) Is ΔADB≅ΔADC ? Give reason.

(iii) Is <B = <C ? Justify your anser.

(iv) Is BD=CD ? Give reason .



34. The performance of a student in I st term and 2nd term is given.

Draw a double bar graph choosing appropriate scale and answer the following:

Subjects	English	Hindi	Maths	Science	S.Science
1 st term(M.M.100)	60	72	88	81	73
2 nd term(M.M.100)	70	65	95	85	75

(i) In which subject , has the child improved his performance the most ?

(ii) In which subject the performance the least ?