# INTERNATIONAL INDIAN SCHOOL, DAMMAM
# ANNUAL EXAMINATION (2017 – 18)

SUBJECT: **MATHEMATICS** TIME: 3 HOURS
CLASS : VII MAX.MARKS:80

## SET – A

## Instructions

1. All questions are compulsory.
2. There is no overall choice. However, an internal choice has been given in each sections B, C and D. Attempt any one.
3. Section A: Questions 1- 5 carry 1 mark each.
4. Section B: Questions 6- 11 carry 2 marks each.
5. Section C: Questions 12-20 carry 3 marks each.
6. Section D: Questions 21-29 carry 4 marks each.

## SECTION A (1 x 5 = 5)

1. Write the coefficient of $y^2$ in the expression $4x^2y - 3xy^2 + 2xy$.
2. Reduce to standard form: $\frac{22}{-121}$
3. The angle which is equal to its complement is _____.
4. Two dice are placed side by side facing 2 + 6. What would be the total of face opposite to it?
5. 20% of a number is 16. Find the number.

## SECTION – B (2 x 6 = 12)

6. Show the terms and factors of the expression by tree diagram.
   $4p^2q - 3pq^2 + 5p$
7. Solve: $18 + 6(t - 6) = 0$
8. i) State the number of lines of symmetry for
   a) a rhombus b) a regular hexagon

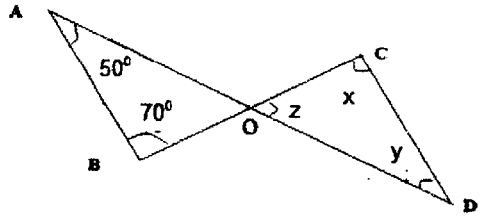
   ii) What other name can you give to the line of symmetry of
   a) an isosceles triangle b) a circle

9. Verify 15 x [ 6 + (-2) ] = [ 15 x 6] + [15 x (-2)]

**OR**

Evaluate: [ (-16 ) ÷ 4] - [ (-10) ÷ 5]

10. If AB II CD, find the values of angles x, y and z




11. ABC is a triangle, right angled at C. If AB = 20cm and AC = 12cm, find BC.

## SECTION – C (3 x 9 = 27)

12. Two times a number subtracted from 20 gives three times the number. Find the number.

**OR**

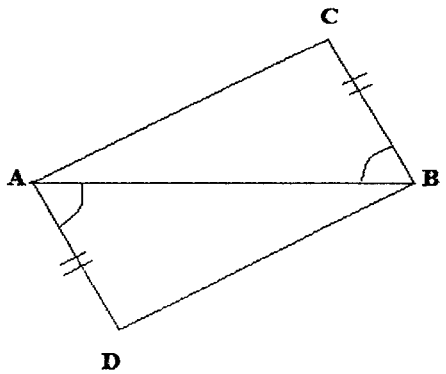
The length of a rectangle is 2 times its breadth. If the perimeter is 120cm, find the length and breadth.

13. An air conditioner cools the room at the rate of 4°c per hour. If at the beginning the temperature of the room is 30°c, find the number of hours it takes to lower down the temperature to -2°c.

14. The three angles of a triangle are in the ratio of 1:2:1. Find all the angles of the triangle. Also classify the triangle in 2 different ways.

15. List five rational numbers between $\frac{-4}{5}$ and $\frac{-3}{4}$

16. In the given figure equal sides and equal angles have been marked by the same signs.




(i) Check whether ΔABC ≅ ΔBAD. If yes, state the congruence and the three pairs of corresponding parts.

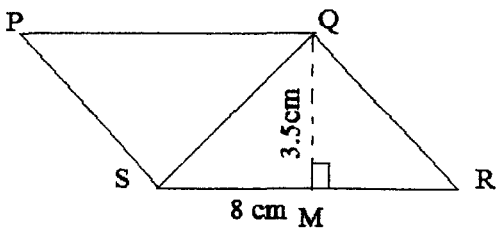
(ii) Which among the following is true?
(a) ∠ABC = ∠ABD (b) ∠CAB = ∠DBA
(c) ∠DBA = ∠CBA

17.

In the figure PQRS is a parallelogram. QM is the height from Q to SR and QS is a diagonal. If SR is = 8cm and QM = 3.5cm. Find the area of

i) the parallelogram PQRS

ii) the triangle RSQ




18. What should be added to $x^2 + 8x - 3$ to get $3x^2 - 7x - 8$?

19. a) Convert 75% to fraction in its simplest form.

b) The population of a town decreased from 50,000 to 30,000. Find the percentage of decrease.

20. Find the sum of $\frac{-4}{9} + \frac{-5}{12}$

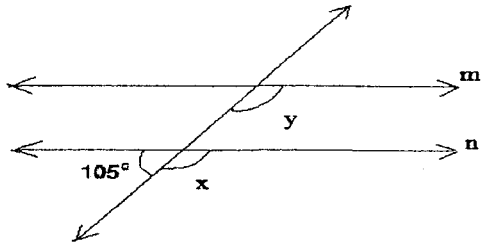
## SECTION – D (4 x 9 = 36)

21. Simplify the expression and find the value when p = 3 and q = -2

$(p^2 - pq) - (p^2 - 2pq) - (3pq + 2)$

22. i) If the angles ( 5p + 10 ) ° and ( 10p + 20 )° are supplementary angles then find the value of 'p'

ii) In the figure, if m and n are parallel lines, find x and y.




23. i) Represent $\frac{-3}{5}$ and $\frac{6}{5}$ on a number line.

ii) Which is greater? $\frac{5}{-6}$ or $\frac{-7}{12}$

24. Find the value using suitable properties.

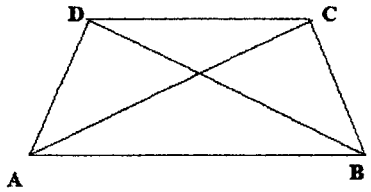
a) -50 x 99 + -50

b) -25 x 298 x 4 x10

25. Raj bought a radio for ₹ 6000.
    a) Find his profit and profit percentage if he sold it for ₹ 6300.
    b) If he sells it at a loss of 20%, find the selling price.

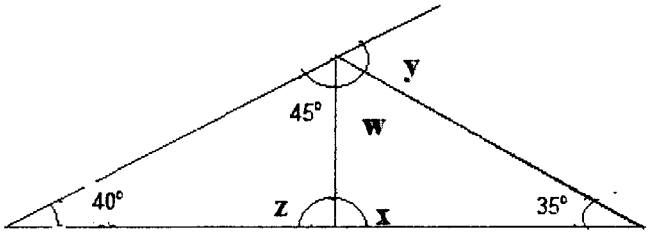
26. Circumference of a circle is equal to the perimeter of a square. If the diameter of the circle is 14cm, what will be the length of each side of the square? Also find the area of the square. ( $\pi = \frac{22}{7}$ )

27. ABCD is a quadrilateral. Is AB + BC + CD + DA < 2(AC + BD)?




**OR**

Find the unknown angles w, x, y, z using properties.




28. A rectangular field is 30m long and 20m wide. Two cross roads, each of width 3m, are constructed at right angles through the center of the field. Find the area of the cross roads. Also find the area of the remaining portion of the field.

29. ΔPQR is an isosceles triangle with PQ = PR also PM is the altitude drawn from P on QR.
    i) State the three pairs of equal parts in ΔPMQ and ΔPMR
    ii) Is ΔPMQ ≅ ΔPMR? If yes state the congruence criterion.
    iii) Which is the corresponding part of MQ

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