

**INTERNATIONAL INDIAN SCHOOL – DAMMAM**  
**SECOND TERM EXAMINATION (DECEMBER 2017)**

CLASS: VII

MAX. MARKS: 80

SUBJECT: MATHEMATICS

SET-B

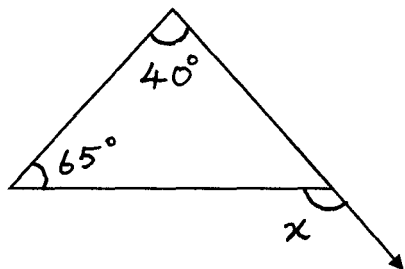
TIME: 3 HOURS

Instructions:-

1. All questions are compulsory.
2. The question paper consists of 29 questions divided into 4 sections- Section A, Section B, Section C and Section D.
3. Section A contains 5 questions of 1 mark each, Section B contains 6 questions of 2 marks each, Section C contains 9 questions of 3 marks each and Section D contains 9 questions of 4 marks each.
4. There is no overall choice. However, internal choice has been given in one question each in Section B, Section C and Section D.

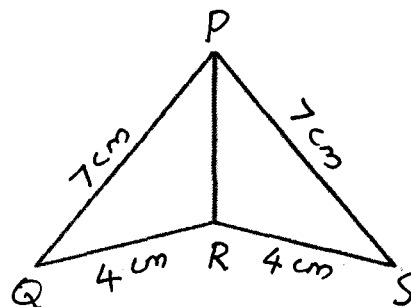
**SECTION - A (1 × 5 = 5)**

1. A \_\_\_\_\_ is a skeleton-outline of a solid that can be folded to make it.
2. Write the numerical coefficient of  $-127p^2q^2r$ .
3. Find  $[(-5) + (-3)] \div (-4)$ .
4. Express  $\frac{9}{24}$  as percentage.
5. Find the value of 'x' in the given figure?



**SECTION - B (2 × 6 = 12)**

6. In the given figure, check whether  $\Delta PRQ$  and  $\Delta PRS$  are congruent. If yes, state the congruence and state the three pairs of equal parts.



7. The lengths of two sides of a triangle are 10 cm and 14 cm. Between what two measures should the length of the third side fall?
8. Find the terms and factors using tree diagram for the expression:  $4xy + 7xy^2 - 9y$
9. A shopkeeper bought a chair for Rs.2,500 and sold it for Rs.2,800. Find the gain percentage.

**OR**

Price of an item decreased from Rs.1,000 to Rs.840. Find the percentage of decrease.

10. Find the value using suitable property:  $(-39) \times (-62) + 72 \times (-39)$
11. Solve:  $4(3p - 5) + 6 = 70$

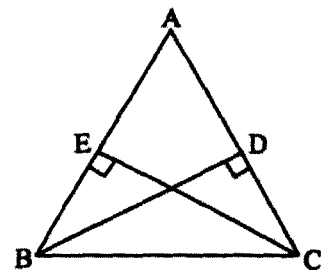
**SECTION - C (3 × 9 = 27)**

12. Juhi's father's age is 7 years more than three times Juhi's age. Find Juhi's age if her father is 52 years old.
13. A 25 m long ladder reached a window 24 m high from the ground on placing it against a wall at a distance 'k'. Find the distance of the foot of the ladder from the wall?
14. Simplify the expression and find the value if  $a = 2$  and  $b = (-1)$   
 $5(2a - b) + 6 + 4b + 2a$ .

**OR**

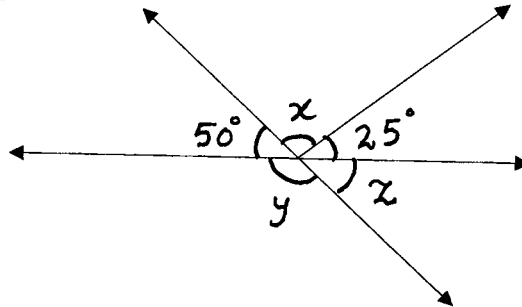
What should be the value of 'p' if the value of  $3x^2 - 2x + p = 20$ , when  $x = (-2)$ .

15. In the given 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  $\triangle CBD \cong \triangle BCE$ ? Give reasons?
  - c) Is  $\angle DCB = \angle ECB$ ? Give reasons?



16. Chalk contains calcium, carbon and oxygen in the ratio 7:3:10.
  - a) Find the percentage of carbon in chalk?
  - b) If in a stick of chalk, carbon is 9g, what is the weight of the chalk stick?

17. Find the values of  $x$ ,  $y$  and  $z$  ?



18. a) An elevator descends into a mine shaft at the rate of 6 metre per minute. What will be its position after one hour?

b) If it begins to descend from 40 m above the ground, what will be its position after 45 minutes?

19. Arun sells a car for Rs.4,20,000. He loses 20% in the bargain. What was the price at which he bought it?

20. Draw rough sketches for the following:

a) In  $\Delta PQR$ ,  $PE$  is a median.

b) In  $\Delta ABC$ ,  $AB$  and  $AC$  are altitudes of the triangle.

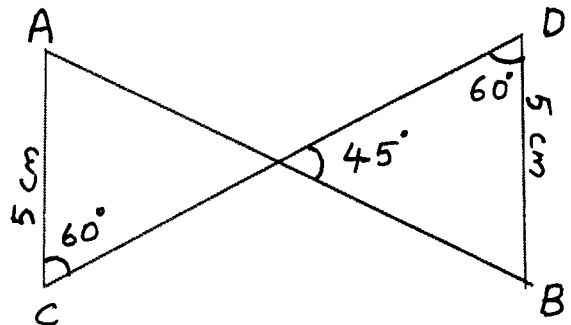
c) In  $\Delta XYZ$ ,  $YL$  is an altitude in the exterior of the triangle.

### SECTION - D ( $4 \times 9 = 36$ )

21. In the given figure, check whether the triangles  $AOC$  and  $BOD$  are congruent.

a) If yes, state the congruence and the three pairs of corresponding parts?

b) Is  $OC = OD$ ? Why or why not?



22. Rs. 7,250 is borrowed at 5.5% rate of interest p.a. Find the interest and the amount to be paid at the end of 3 years.

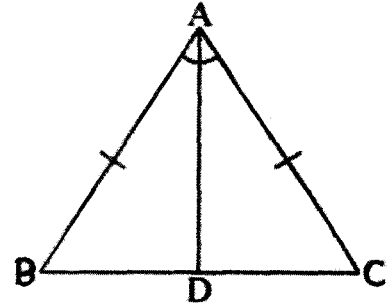
23. Find the perimeter of the rectangle whose length is 15 cm and a diagonal is 17 cm?

**OR**

The diagonals of a rhombus measure 14 cm and 48 cm. Find its perimeter?

24. In the given figure,  $AB = AC$  and  $AD$  is the bisector of  $\angle BAC$ .

- State the three pairs of equal parts in  $\triangle ADB$  and  $\triangle ADC$ .
- Is  $\triangle ADB \cong \triangle ADC$ ? Give reasons.
- Is  $\angle B = \angle C$ ? Give reasons.
- Is  $BD = CD$ ? Give reasons.

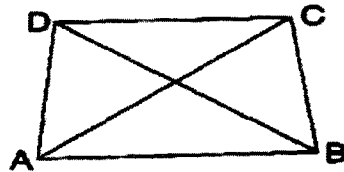


- What should be added to  $(5p^2 + 7q - 6)$  to obtain  $(3p^2 - 4q + 3)$ ?
- Write an algebraic expression for the following: Thrice of a number  $x$  added to twice of a number  $y$ .

26. In a test (+5) marks are given for every correct answer and (-2) marks are given for every incorrect answer.

- Rohan gets 5 correct answers and 10 incorrect answers out of 15 questions. What is his score?
- Amina answered all the questions and scored 30 marks though she got 8 correct answers. How many questions has she attempted incorrectly?

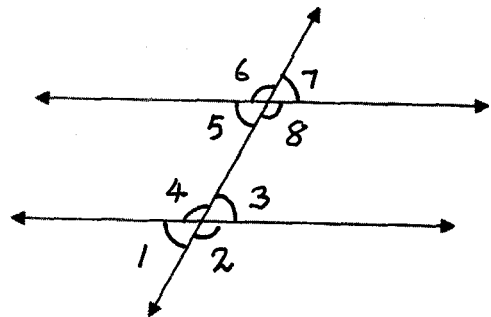
27. ABCD is a quadrilateral. Is  $AB + BC + CD + DA > AC + BD$ ?



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

29. In the adjoining figure, identify

- The pairs of corresponding angles.
- The pairs of alternate interior angles.
- The pairs of interior angles on the same side of the transversal.



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