SRS GLOBAL SCHOOL

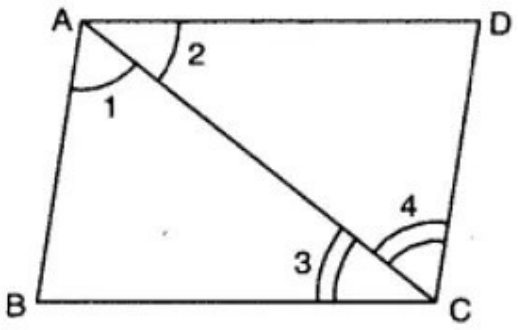
QUESTION BANK FOR PT-2 EXAMINATION

Subject: Mathematics

Class: IX

Lesson 7: Triangles

1. If in Δ PQR, ∠P=∠Q+∠R, then what will be the shape of given triangle?
2. If ΔABC, AB=BC, ∠C=50, then find the measure of ∠Q?
3. In the given figure, if ∠1=∠2 and ∠3=∠4, then prove that BC=CD



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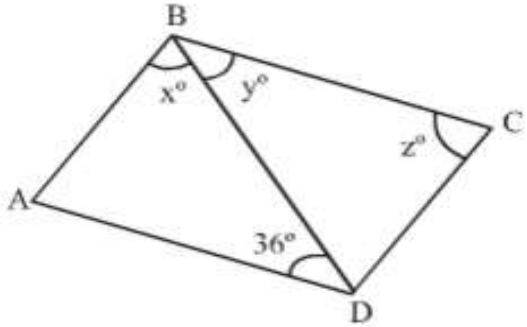
4. If the angles of a triangle are in the ratio 2:1:3, then find the measure of the smallest angle.
5. In a triangle, If AB=AC and AB is produced to D such BD= BC, find ∠ACD:∠ACD.
6. The sum of the angles of a triangle is 80° and their difference is 20°. Find the angles.
7. In the given figure, AB||DC. If x=4y/3 and y=3z/8, Find ∠BCD, ∠ABC and



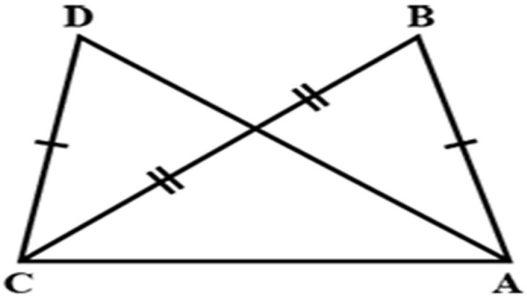
∠BAD.

8. In a ΔABC, if 2∠A=3∠B=6∠C, determine all the three angles.
9. The angles of a triangle are (x-20°) and (1/2x-10)°Find the value of x.
10. Fill in the blanks:
    a. A triangle cannot have two _____ angles.
    b. All angles of triangle can be_____ angles.
    c. A triangle cannot have more than _____ obtuse angle.

d. A Triangle cannot have more than ____ right angle.
e. The longest side of a right-angle triangle is _____.

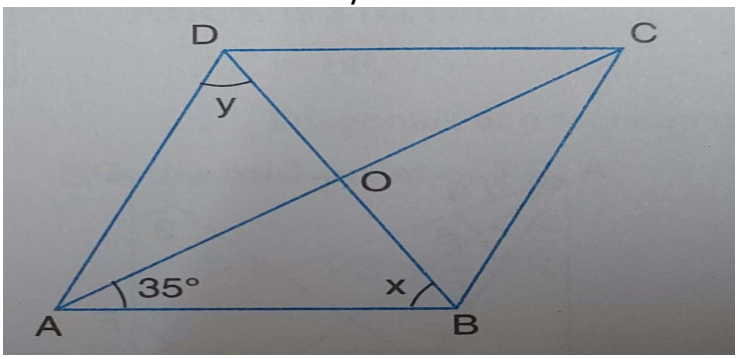
11. In triangle ABC and CDE, if AC=CE, BC=CD, A=60°, C=30° and D=90°. Are two triangles congruent.

12. In the given figure,it is given that AB=CDand AD=BC Prove that triangle ΔADC is congruent to triangle CBA

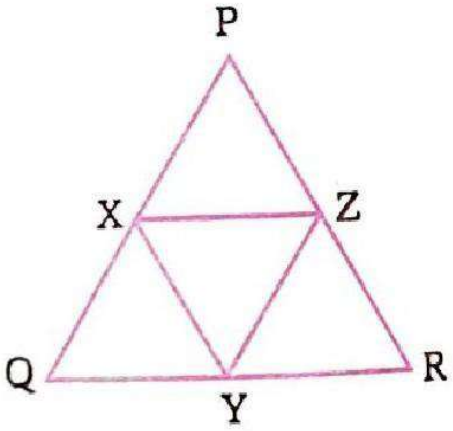


Lesson 8: Quadrilateral

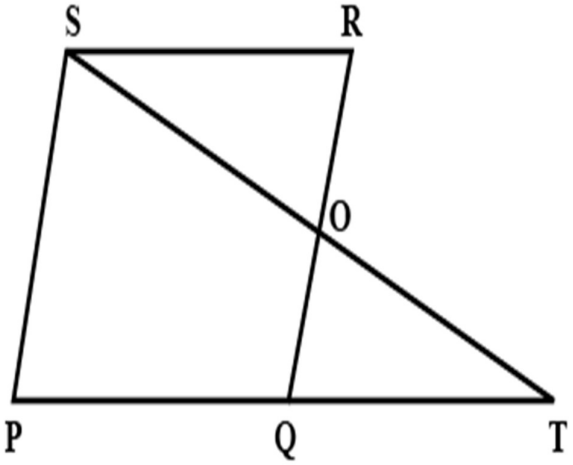
1. In the given figure ABCD a rhombus, whose diagonal meet at O. find the values of x snand y



2. PQRS is a parallelogram in which PSR=75° and side PQ is produced to G .Fing Angle SRQ and Angle RQG
3. In the figure, X, Y, and Z are midpoints of PQ, QR, and RS respectively of an equilateral triangle PQR. Prove that XYZ is also an equilateral triangle.

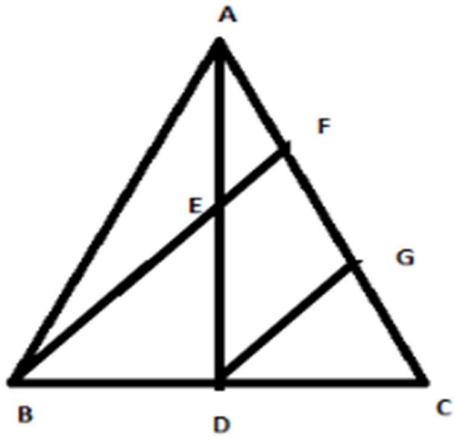


4. Two opposite angles of a parallelogram are (3x-2) ° and (50-x) °. Find the measure of each angle of a parallelogram.
5. Opposite angles of a quadrilateral PQRS are equal if PQ=6cm, determine RS.
6. Show that if diagonals of a quadrilateral are equal and bisect each other at right angles so it is a square.
7. In the given figure, PQRS is a Parallelogram in which PQ is produced to T such that QT=PQ. Prove that ST bisects QR.



8. Prove that the figure obtained by joining the midpoint of the pairs of consecutive sides of Quadrilateral is a Parallelogram.
9. In ABC, AD is the median through A and E is the midpoint of AD. BE produced meets AC in F(see figure).Proof that

   AF= (1/3)AC



10. In a ABC, D, E and F are respectively the midpoints of BC, CA, and AB. If the length of side AB, BC and CA are 7cm, 8cm and 9cm.Find the perimeter of ΔDEF.

Lesson 12: Statistics

1. Marks obtained by students in English test (out of 100) of 20 students are given below:
   75,69,88,55,95,88,73,64,75,98,88,95,90,95,88,44,59,67,88,99. Find the median and mode of the date.
2. Mean of 20 observations is 17. If in the observations, observation 40 is replaced by 12, find the new mean.
3. Find the mean of the following distribution:

X	5	10	15	20	25
F	4	12	20	28	36

4. The observation 6,14,15,17,x+1,2x-13,30,32,34,43 is written in ascending order. The median of the data is 24. Find the value of x.
5. Given below are the ages of 25 students of class IX in a school. Prepare a discrete frequency distribution:
   15,16,16,14,17,17,16,15,15,16,16,17,15,16,16,14,16,15,14,15,16,16,15,14,15
6. If the mean of the following distribution is 6. Find the value of p

X	2	4	6	10	p+5
F	3	2	3	1	2

7. Find the median of the values:
   37,31,42,43,46,25,39,45,32
8. Find the median of the following data:
   25,34,31,23,22,26,35,28,20,32
9. Find Mode from the given data:
   125,175,225,125,225,175,325,125,375,225,125
10. The arithmetic mean and mode of a data are 24 and respectively, then

find the median of the data.

11. If the difference of mode and median of a data is 24, then find the difference of median and mean.
12. If the mean of 2,4,6,8, x,y is 5, then find the value of x+y.