

INTERNATIONAL INDIAN SCHOOL-RIYADH

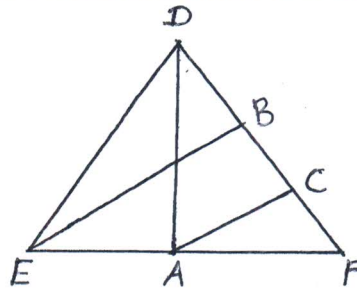
WORKSHEET 2017-18

SUBJECT: Mathematics

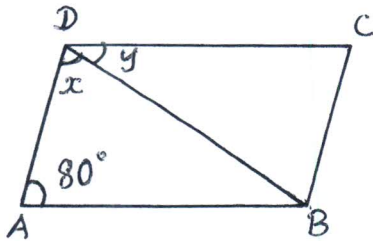
STD: IX

QUADRILATERALS

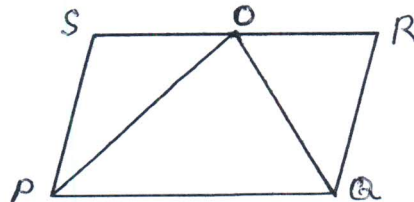
1. In the given figure, DA and EB are medians and $AC \parallel EB$.
Show that $CF = \frac{1}{4} DF$



2. In the figure, ABCD is a rhombus,
Find the values of x and y . ($x = y = 50^\circ$)

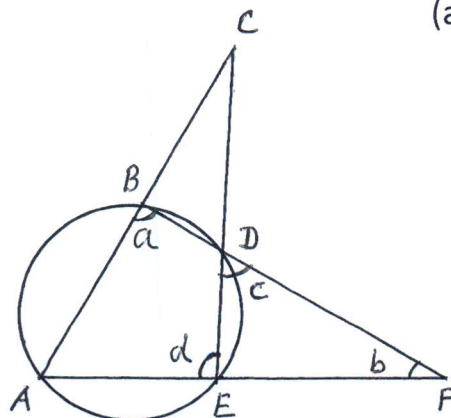


3. In a parallelogram PQRS of the given figure the bisectors of $\angle P$ and $\angle Q$ meet SR at O. show that $\angle POQ = 90^\circ$

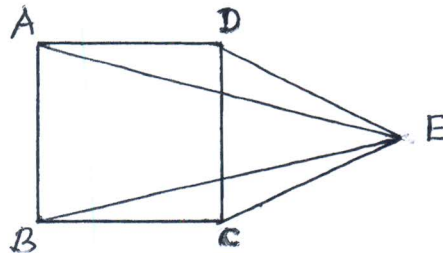


4. In the given figure, find the values of a, b, c and d . Given that $\angle BCD = 43^\circ$ and $\angle BAE = 62^\circ$.

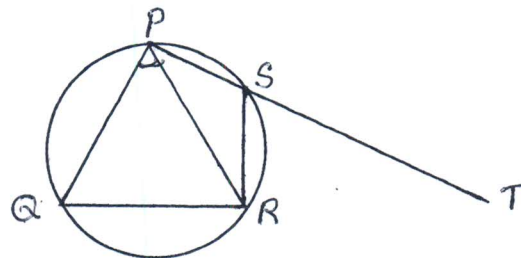
($a = 105^\circ, b = 13^\circ, c = 62^\circ, d = 75^\circ$)



5. Prove that opposite angles of an isosceles trapezium are supplementary.
6. AC and BD are chords of a circle which bisect each other
Prove that: (i) AC and BD are diameters
(ii) ABCD is a rectangle.
7. ABCD is a square and on the side DC, an equilateral triangle is constructed.
Prove that (i) $AE = BE$ and (ii) $\angle DAE = 15^\circ$

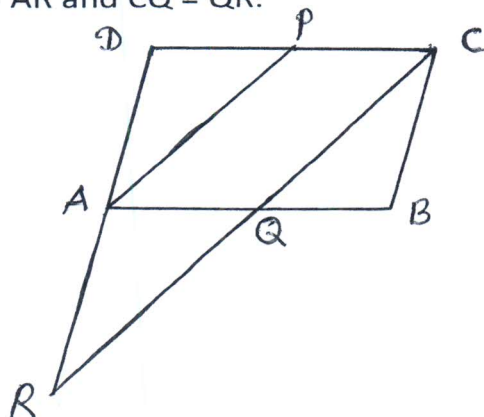


8. The angles A,B,C and D of a quadrilateral ABCD have measures in the ratio 2:4:5:7. Find the measures of these angles. What type of quadrilateral is it? Give reasons. {40°, 80°, 100°, 140°, trapezium}
9. In the given figure, $PQ = QR$ and if $\angle QPR = 55^\circ$, find $\angle TSR$.



(70°)

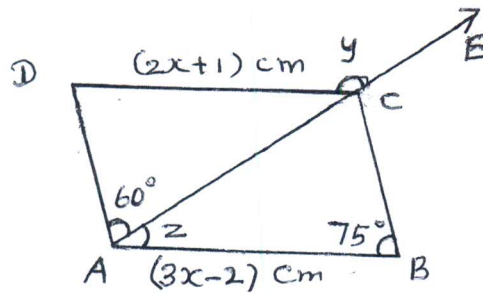
10. Prove that the quadrilateral formed by joining the midpoints of the consecutive sides of a rectangle is a rhombus.
11. P in the midpoint of the side CD of a parallelogram ABCD. A line through C parallel to PA intersects AB at Q and DA produced at R.
Prove that $DA = AR$ and $CQ = QR$.



12. In a parallelogram ABCD if $\angle A = (3x - 20)^\circ$ $\angle B = (y - 15)^\circ$ $\angle C = (x + 40)^\circ$
Find the value of x , y and $\angle D$.

$$(x = 30^\circ, y = 95^\circ, \angle D = 80^\circ)$$

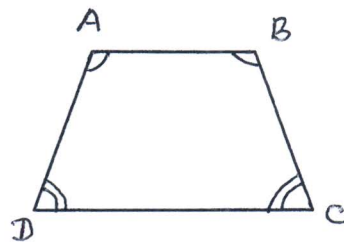
13.



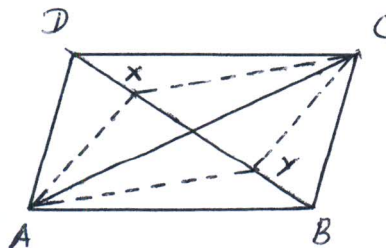
In the figure, ABCD is a parallelogram.
Find the value of x , y and Z .

$$(x=3, y=135^\circ, Z=45^\circ)$$

14. ABCD is a quadrilateral such that
 $\angle A = \angle B$ and $\angle C = \angle D$
Prove that $AD=BC$.



15. In the figure ABCD is a parallelogram x & y are points on the diagonal BD.
Such that $Dx = By$. Prove that AXCY is a parallelogram.



Prepared by

IX & X girls section