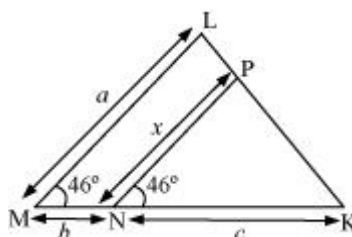


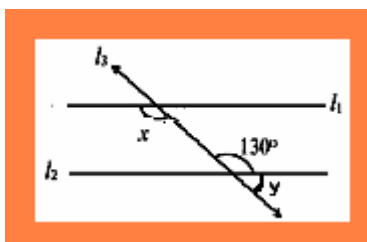
Year 9 Geometry Worksheet

1. Prove that the sum of the four angles of a quadrilateral is 360° .
2. In Fig. below, $\angle M = \angle N = 46^\circ$. Express x in terms of a , b and c where a , b and c are lengths, of LM, MN and NK respectively.

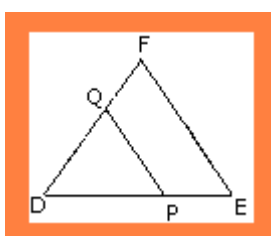


3. If the diagonals of a quadrilateral bisect each other, prove that then the quadrilateral is a parallelogram .
4. Show that the bisectors of angles of a parallelogram form a rectangle
5. In Figure the line l_3 is a transversal to the parallel lines l_1 and l_2 .

Find the angles x and y .



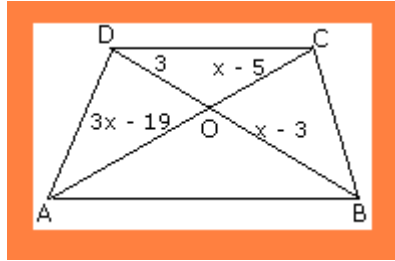
6. In figure, $PQ \parallel EF$ if $DP = x$, $PE = x - 2$, $DQ = x + 2$ and $QF = x - 1$. Find the value of x



Year 9 Geometry Worksheet



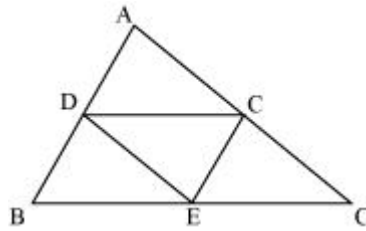
7. In the trapezium, ABCD, $AB \parallel DC$. Find the value of x .



8. Find the number of sides of a regular polygon if each of its interior angles is 108° .

9. D, E, and F are the mid-points of the sides AB, BC, and CA respectively of $\triangle ABC$.

Find $\frac{\text{ar}(\triangle DEF)}{\text{ar}(\triangle ABC)}$.



10. D is a point on the side BC of a triangle ABC such that $\angle ADC = \angle BAC$.

Prove that: $CA/CD = CB/CA$.