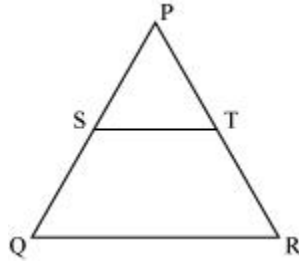


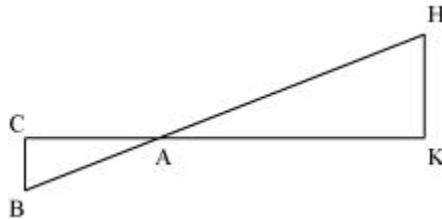
Year 11 Plane Geometry Worksheet



1. In fig. below, S and T are points on the sides PQ and PR, respectively of ΔPQR , such that $PT = 2$ cm, $TR = 4$ cm and ST is parallel to QR. Prove that the ratio of the areas of ΔPST and ΔPQR is 1:9.



2. In fig. below, ΔAHK is similar to ΔABC . If $AK = 10$ cm, $BC = 3.5$ cm and $HK = 7$ cm. Prove that $AC = 5$ cm.

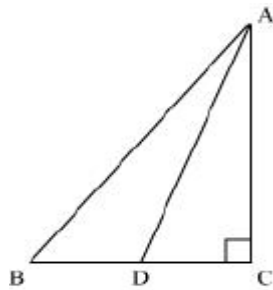


3. If all the sides of a parallelogram ABCD touch a circle, prove that the parallelogram ABCD is a rhombus.
4. Find the sum of all angles of a regular hexagon.
5. Two sides of a right angle triangle are 12 and 13. What are possible the length of the third side?
6. If diagonal of a square room is d, what is the area of the room?

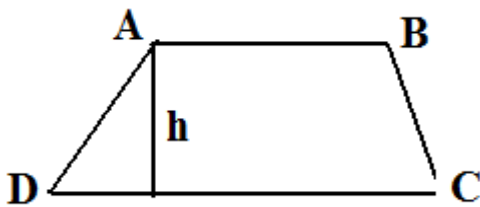
Year 11 Plane Geometry Worksheet



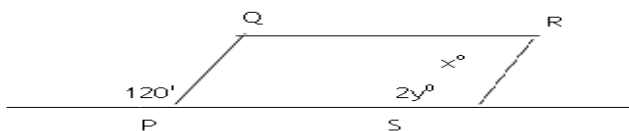
7. In figure below, ABC is a right triangle, right angled at C and D is the mid-point of BC. Show that $4AD^2 - 3AC^2 - AB^2 = 0$



8. The lengths of two parallel sides of a trapezium ABCD are 6 cm and 8 cm. Its area is 42 cm^2 . Find its height h .



- 9.



In the figure above, the PQRS is a parallelogram. Find the value of $y - x =$

Year 11 Plane Geometry Worksheet



10. Find the area of shaded region in figure below, if $AC = 24$ cm, $BC = 10$ cm and O is the centre of the circle. [Use $\pi = 3.14$]

