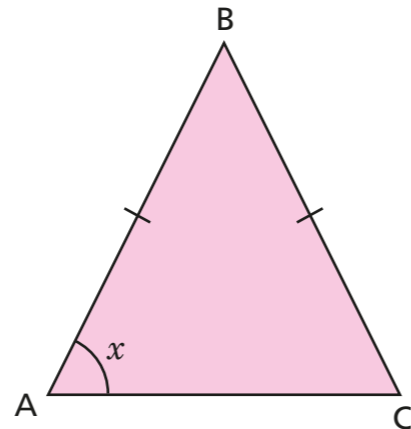
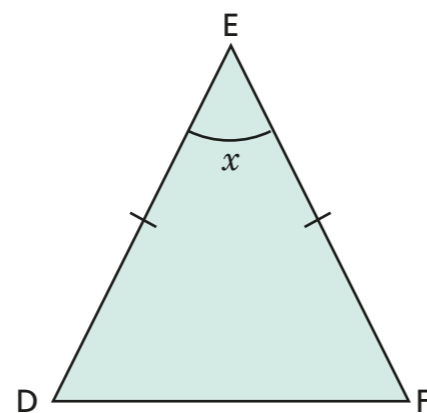


Use known facts to obtain simple proofs H

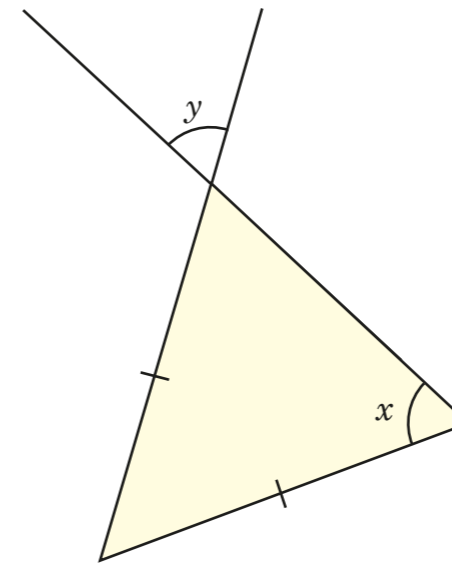
- 1** ABC is an isosceles triangle.
- a) Write an expression for the size of angle ACB. _____
- b) Show that angle ABC = $180 - 2x$
Give reasons to support your answer.



- 2** DEF is an isosceles triangle.
- Show that $\angle EDF = \frac{180 - x}{2}$
Give reasons to support your answer.



- 3** Prove that angle x is equal to angle y .
Give reasons for each step of your workings.



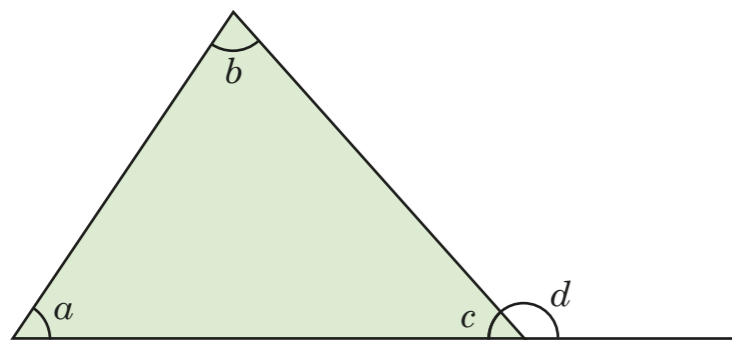
- 4** Line segments AB and CD are parallel.
EF is a transversal that cuts through the line segments at points X and Y respectively.
Angle AXF = t
- a) Draw a diagram to show this.



- b) Show that angle FYD = $180 - t$.
Give reasons to support your answer.



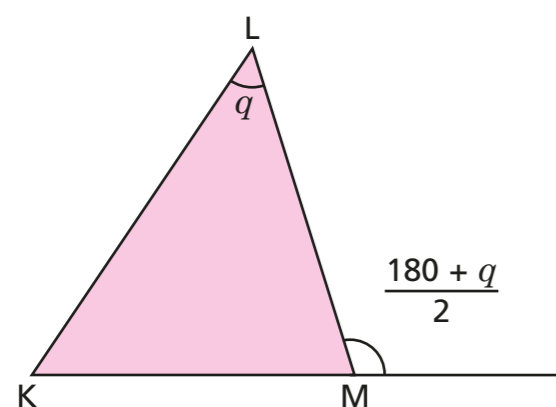
- 5 A triangle has interior angles a , b and c .



Show that $d = a + b$.

Give reasons to support your answer.

- 6 KLM is a triangle.



Prove that triangle KLM is an isosceles triangle.

Give reasons to support each stage of your workings.

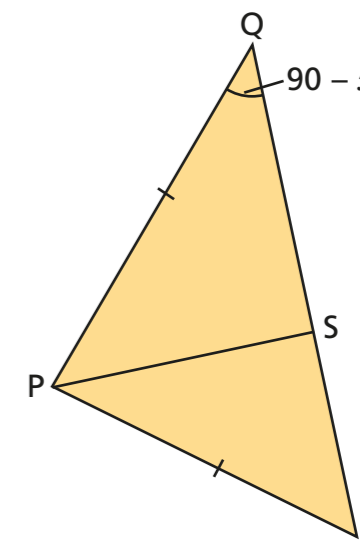


- 7 QPR is an isosceles triangle.

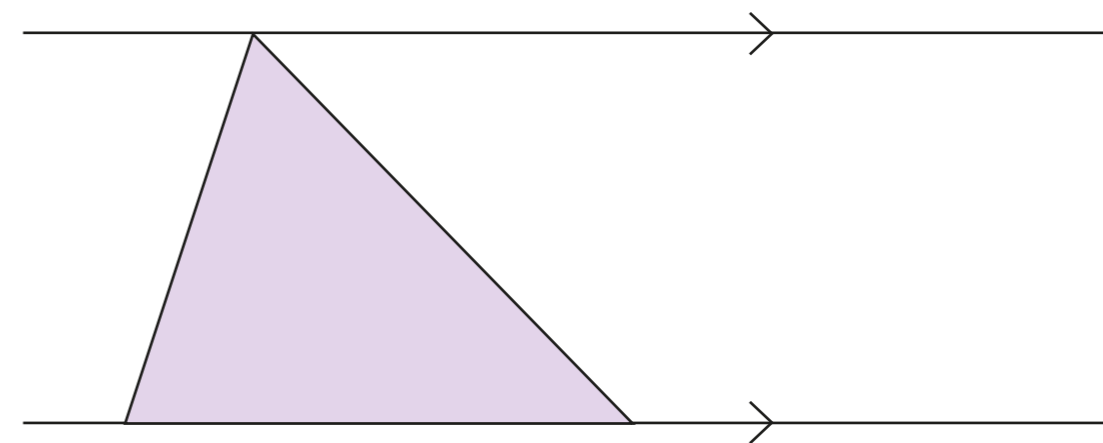
PS is perpendicular to QR.

Prove that PS bisects angle QPR.

Give reasons to support each stage of your workings.



- 8 Use rules of parallel lines to prove that the sum of the angles in a triangle is 180° .



Compare your method with a partner's.

