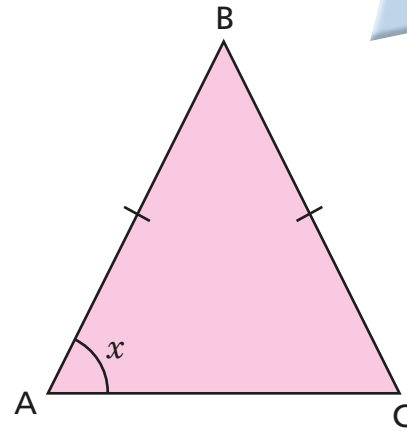


Prove simple geometric facts

H

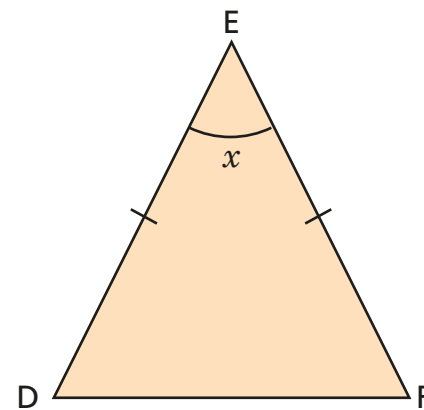
1 ABC is an isosceles triangle.

- Write an expression for the size of angle ACB. _____
- Show that $\angle ABC = 180 - 2x$
Give reasons to support your answer.



2 DEF is an isosceles triangle.

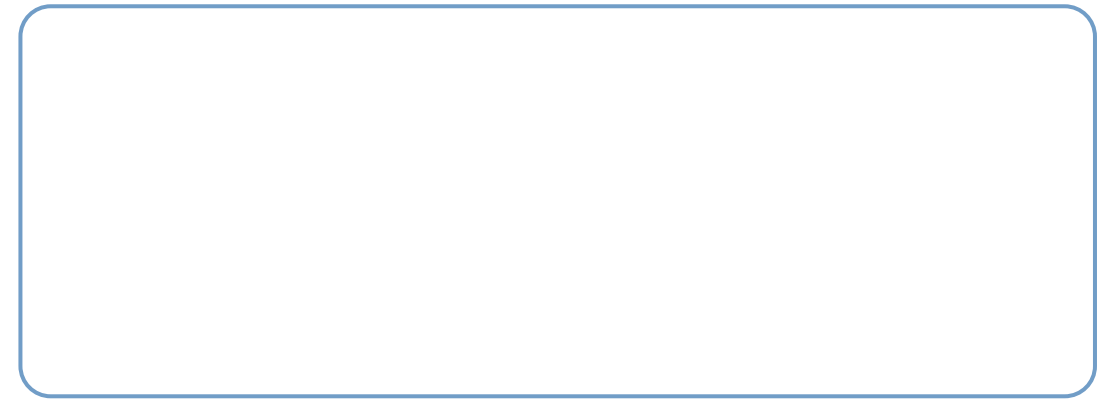
- Show that $\angle EDF = \frac{180 - x}{2}$
Give reasons to support your answer.



3 Line segments AB and CD are parallel.
EF is a transversal that cuts through the line segments at points X and Y respectively.

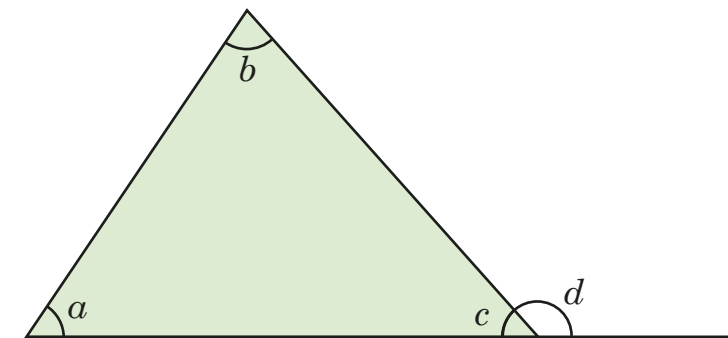
Angle AXF = t

- Draw a diagram to show this.



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

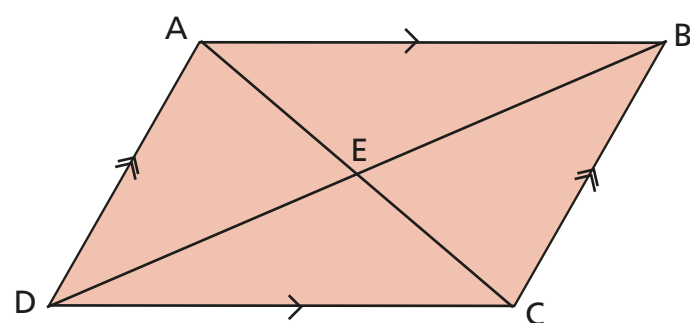
4 A triangle has interior angles a , b and c .



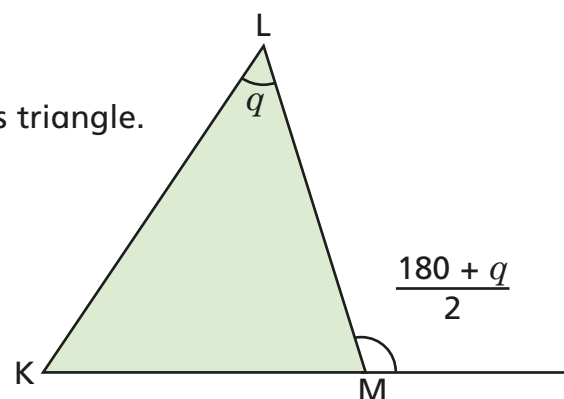
Show that $d = a + b$.

Give reasons to support your answer.

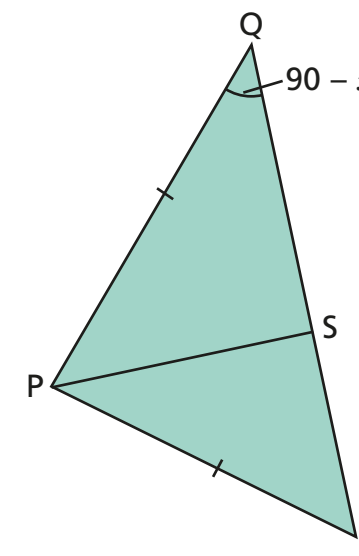
- 5 ABCD is a parallelogram.
Prove that triangles AEB and CED are identical.
Give reasons to support your answer.



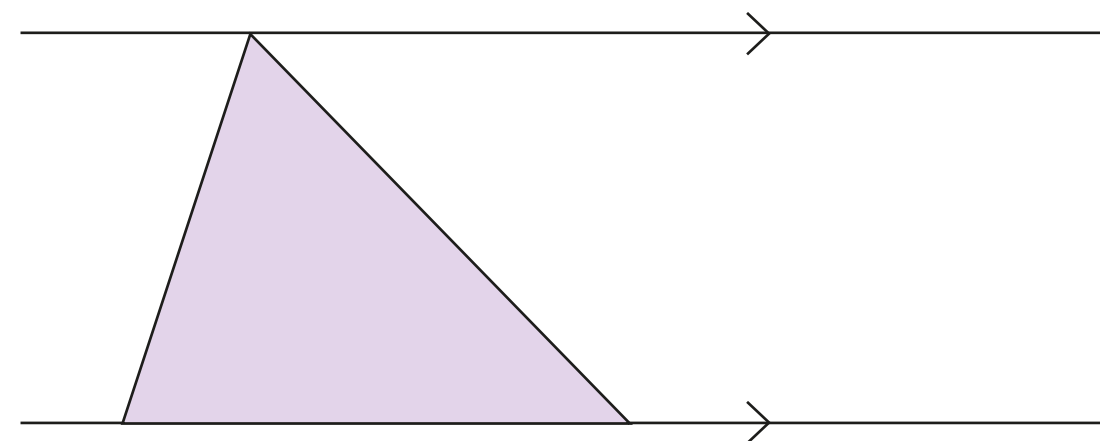
- 6 KLM is a triangle.
Prove that triangle KLM is an isosceles triangle.
Give reasons to support each stage of your workings.



- 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.

