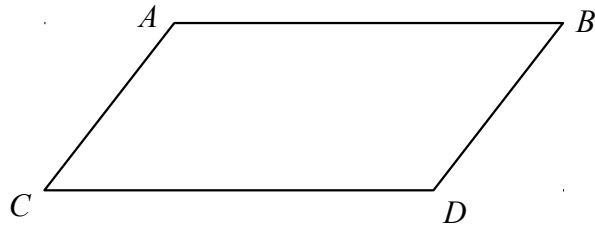


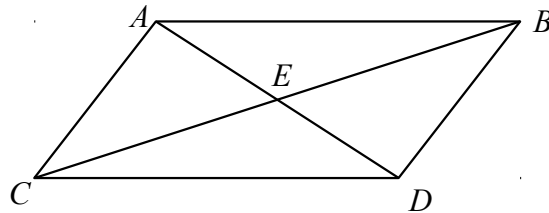
- 1 $ABCD$ is a parallelogram



Prove that triangle ABC is congruent to triangle BCD .

(3 marks)

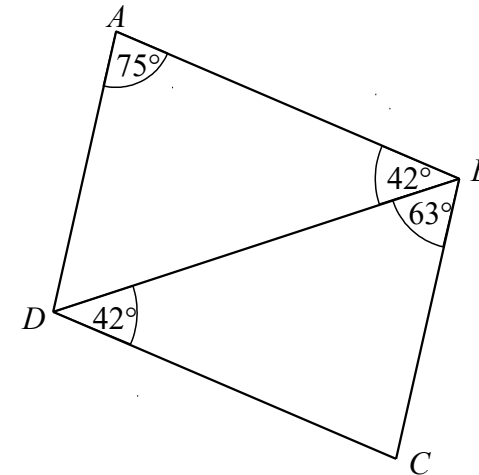
- 2 $ABCD$ is a parallelogram
 E is the point where the diagonals AD and BC meet.



Prove that triangle ACE is congruent to triangle BDE .

(3 marks)

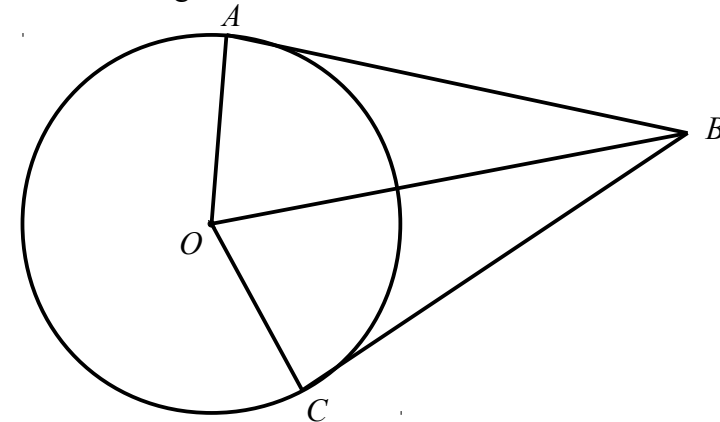
- 3 The diagram shows two triangles, ABD and BCD .



Prove that triangle ABD is congruent to triangle BCD .

(3 marks)

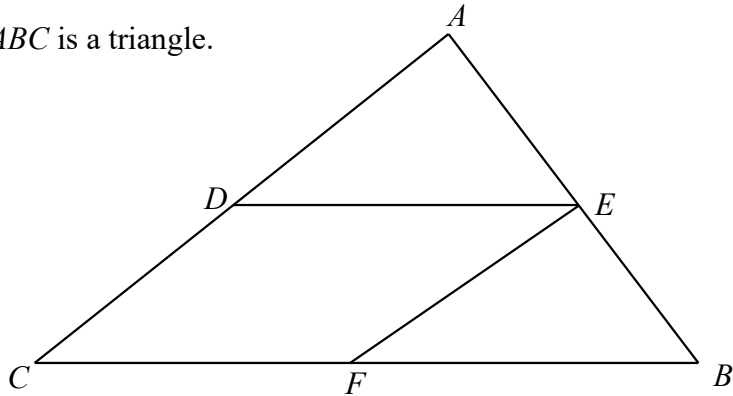
- 4 A and C are points on a circle, centre O .
 AB and BC are tangents to the circle.



Prove that triangle ABO is congruent to triangle BCO .

(4 marks)

5 ABC is a triangle.



$CDEF$ is a parallelogram such that:

D is the midpoint of AC

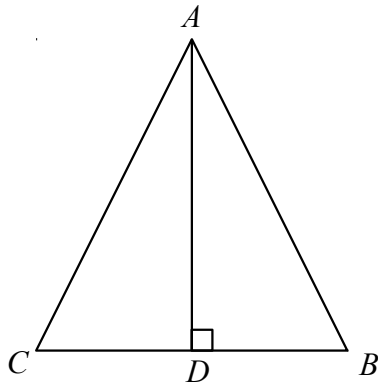
E is the midpoint of AB

F is the midpoint of BC

Prove that triangle ADE is congruent to triangle BEF .

(4 marks)

6 ABC is an equilateral triangle.



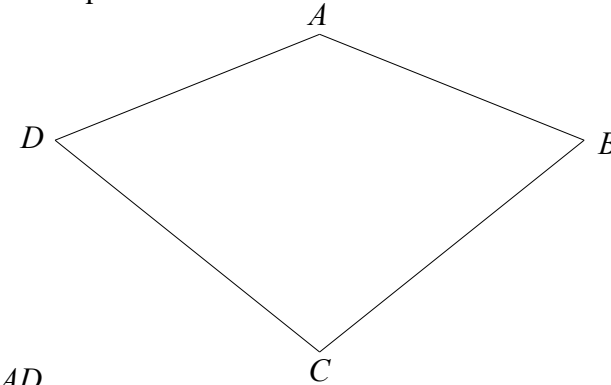
D lies on BC

AD is perpendicular to BC

Prove that angle CAD is equal to angle BAD .

(4 marks)

7 $ABCD$ is a quadrilateral



$AB = AD$

$BC = CD$

Prove that angle ABC is equal to angle ADC .

(4 marks)