Question 1 (25 marks)

The lengths of the sides of a flat triangular field *ACB* are,
| *AB* | = 120 m, | *BC* | = 134 m and | *AC* | = 150 m.

(a) **(i)** Find | ∠*CBA* |. Give your answer, in degrees, correct to two decimal places.

(ii) Find the area of the triangle *ACB* correct to the nearest whole number.

(b) A vertical mast, [*DE*], is fixed at the circumcentre, *D*, of the triangle. The mast is held in place by three taut cables [*EA*], [*EB*] and [*EC*]. Explain why the three cables are equal in length.

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