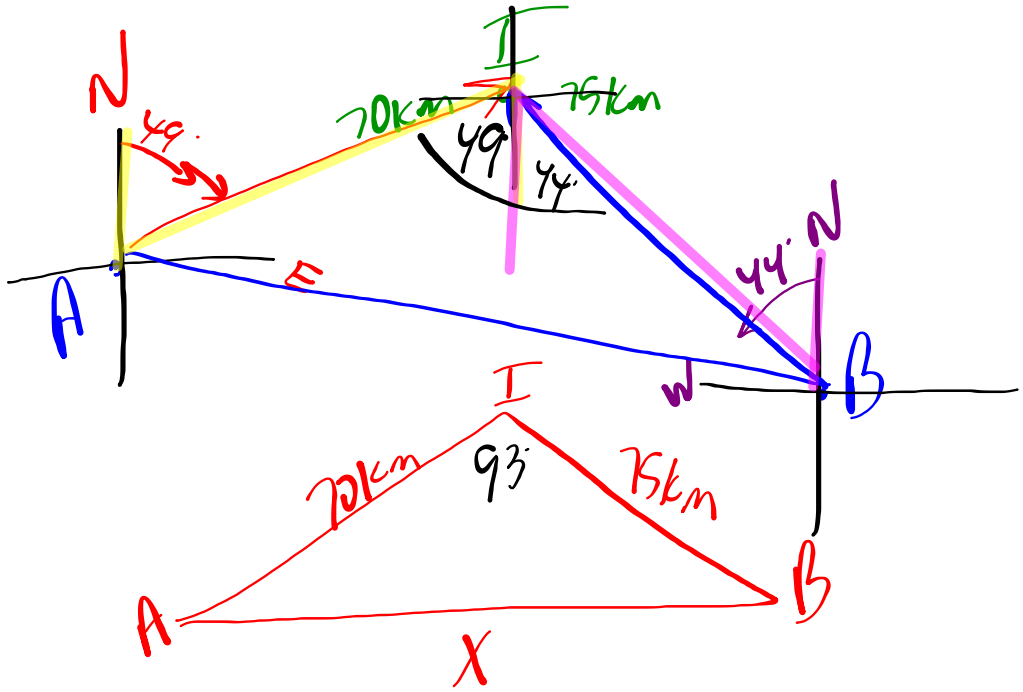
Booklet Questions... 10.12: #9 - 12

Questions

12 Two ships take separate bearings on the same island. From ship A, the island is N49°E and from ship B it is N44°W. If ship A and ship B are respectively 70 km and 75 km from the island, find the distance between the two ships.



$a^2 = b^2 + c^2 - 2bc\cos A$

$x^2 = 70^2 + 75^2 - 2(70)(75)\cos 93°$

x^2

$70^2+75^2-2*70*75*\cos(93)$
11074.52754
$\sqrt{}$(Ans
105.2355812

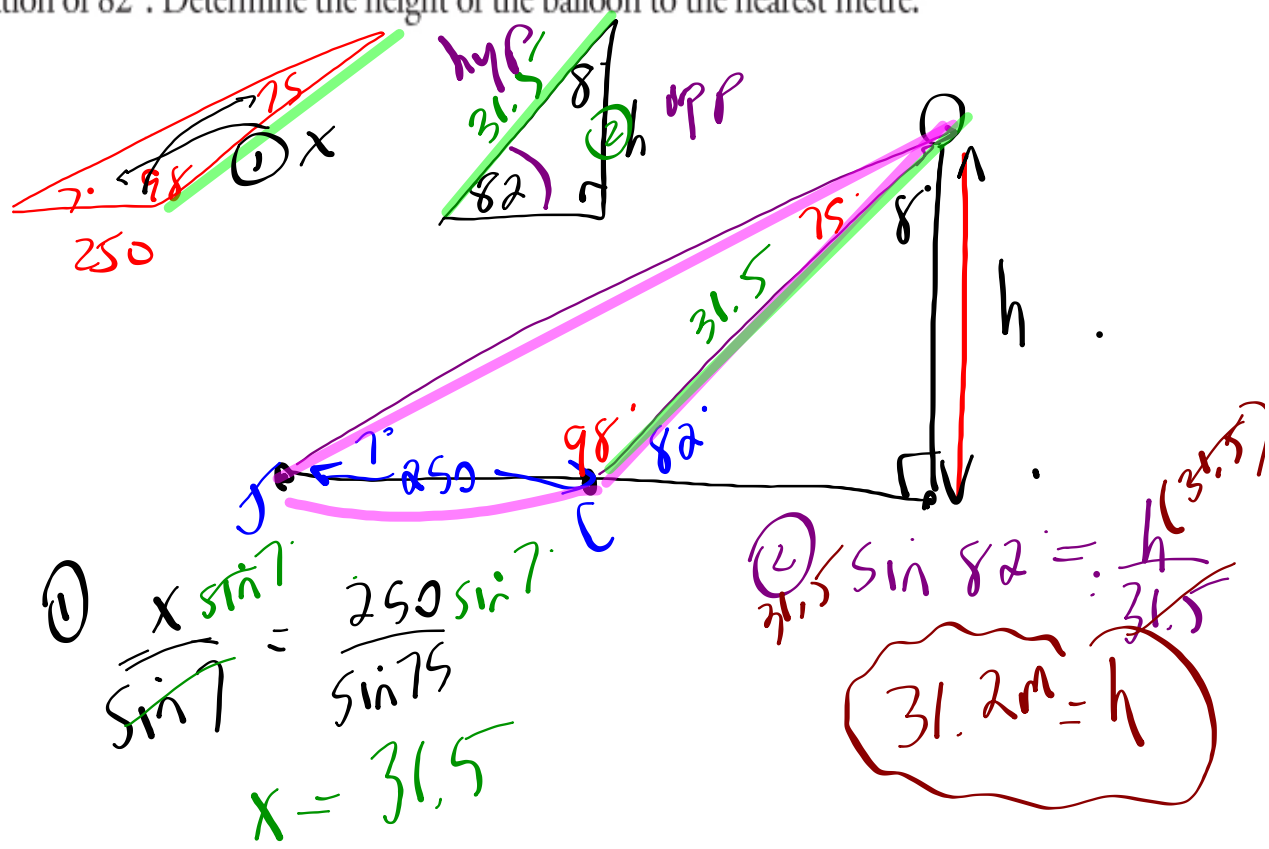
$x =$

105.2 km

EX #2: Solving an application question...

(p. 166)

Colleen and Juan observed a tethered balloon advertising the opening of a new fitness centre. They were 250 m apart, joined by a line that passed directly below the balloon, and were on the same side of the balloon. Juan observed the balloon at an angle of elevation of 7° while Colleen observed the balloon at an angle of elevation of 82°. Determine the height of the balloon to the nearest metre.



HOMEWORK: More Applications/Word Problems

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