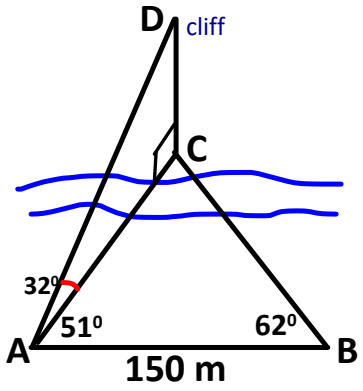
STATION G

1. Hannah walks for 10 km, 20^0 east of north, then changes direction, walking 7km, 50^0 east of south. What is the distance between Hannah and her starting point?

2. A surveyor is on one side of a river. On the other side is a cliff of unknown height that she wants to measure. The surveyor lays out a baseline AB of length 150 m. From point A, she selects point C at the base of the cliff and measures angle CAB to be 51^0. She selects point D on top of the cliff, directly above C, and measures an angle of elevation of 32^0. She moves to point B and measures angle CBA as 62^0. Determine the height of the cliff.



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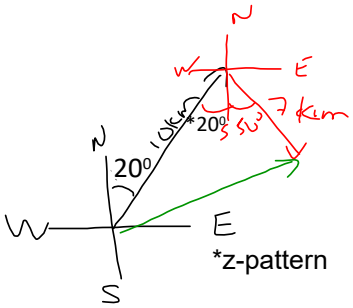

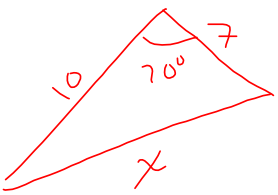

$x^2 = 10^2 + 7^2 - 2(10)(7)\cos 70$

$x \doteq 10.1$ km

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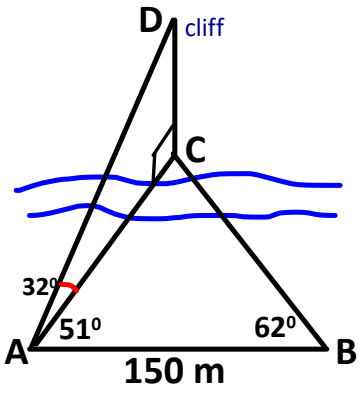

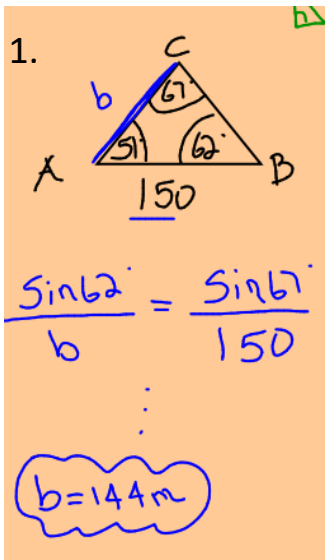

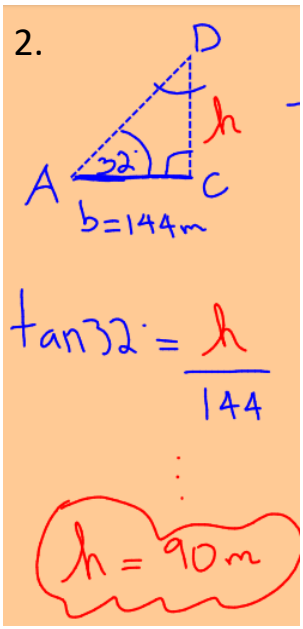

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