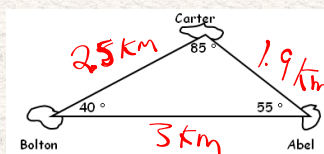
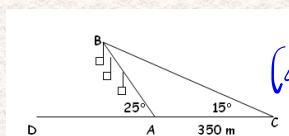


Applications of Trigonometry

1. Abel Island and Bolton Island are 3 km apart. How far is Carter Island from Abel Island and Bolton Island on the given map?



2. To find the length of a proposed ski lift from A to B, a surveyor measures the angles DAB and ACB and records them. The distance between C and A is 350 m. What is the distance from A to B?



$$= 522 \text{ m}$$

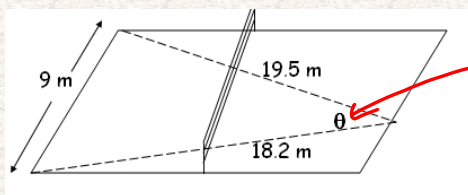
$$\angle BAC = 155^\circ$$

$$\begin{aligned} \frac{\sin C}{c} &= \frac{\sin B}{b} \\ \frac{\sin 15^\circ}{350} &= \frac{\sin 10^\circ}{AB} \\ AB &= \frac{350 (\sin 10^\circ)}{\sin 15^\circ} \\ AB &= 522 \text{ m} \end{aligned}$$

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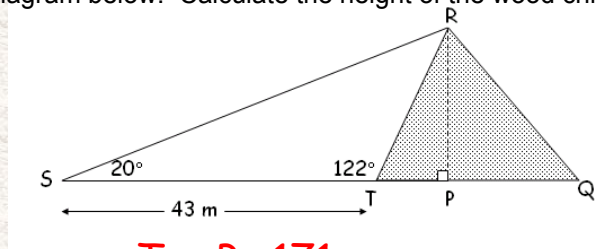
3. In a volleyball game, a player serves the ball from point A. The angle through which the ball must be served in order to stay in the court can be represented by the angle θ .

Find the measure of angle θ , to the nearest degree.



$$\underline{\underline{27^\circ}}$$

4. At a local pulp and paper mill, wood chips are moved by conveyor belt to a top of the wood chip pile, as shown in the cross section diagram below. Calculate the height of the wood chip pile RP.



The height
of the wood
chip pile is
 $RP = 20.3 \text{ m}$

Try Pg 171:
#3 (b) & (c) #4 (b)

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Attachments

PM11-3s2.gsp