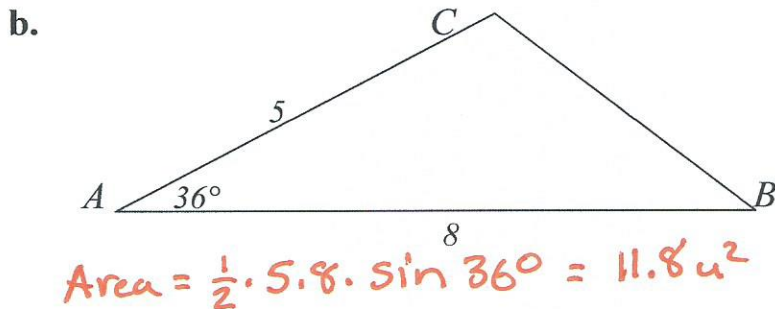
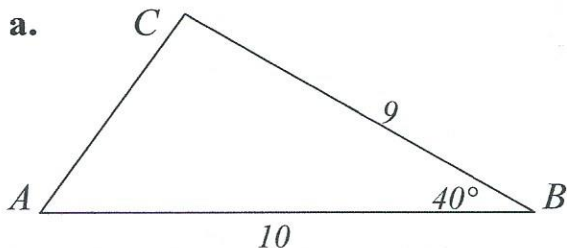


SAS Area = $\frac{1}{2}ab \sin C$
etc.

4. Find the Area of the triangles.

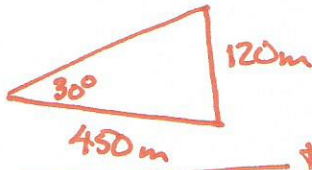


c. $C = 125^\circ, b = 10, a = 5$

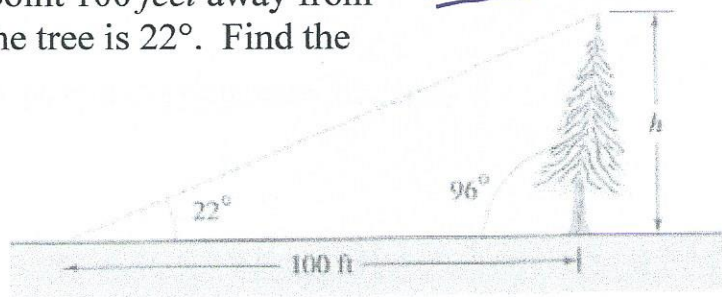
d. $A = 45^\circ, B = 10^\circ, a = 4$ *tricky: not SAS find C then bore*

5. The following information about of a triangular parcel of land is given at a zoning board meeting. "One side is 450 meters long, and another is 120 meters. The angle opposite the shorter side is 30°." Could this be true?

$\frac{\sin 30^\circ}{120} = \frac{\sin x}{450}$
 $450 \sin 30^\circ = 120 \sin x$
 $\frac{450 \sin 30^\circ}{120} = \sin x = 1.9$
too big (>1) Δ can't exist



6. A tree grows leaning 6° from vertical. At a point 100 feet away from the tree, the angle of elevation to the top of the tree is 22°. Find the height h of the tree.



7. A bridge is being built across a small lake from B to C . The bearing between them is $S 41^\circ W$. From point A , 100 yards from B , the bearings to B and C are $S 74^\circ E$ and $S 28^\circ E$. Find the distance from B to C .

$\frac{\sin 41^\circ}{100} = \frac{\sin 74^\circ}{x}$
 $x \sin 41^\circ = 100 \sin 74^\circ$
 $x = \frac{100 \sin 74^\circ}{\sin 41^\circ} = 146.5 \text{ yd}$

