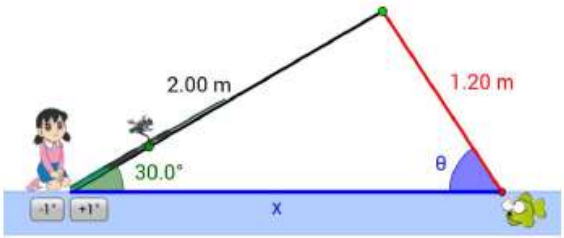
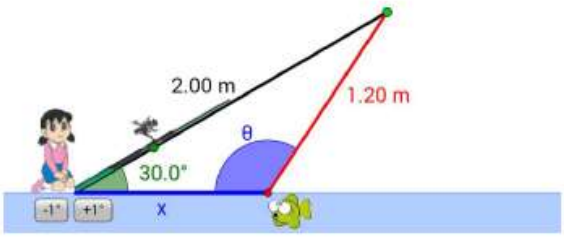
Solving Triangles (S.S.A. case)

Name: _____Class: S. 5_____ (  ) Date: _____

In this worksheet, give your answers correct to 3 significant figures if necessary.

e.g. Find the two possible sets of values of θ and $x$ in the figure.




$$\frac{\sin\theta}{2} = \frac{\sin 30°}{1.2}$$

$\sin\theta = 0.833$

$\theta = 56.4°$ or $\theta = 180° - 56.4°$

$= 123.6°$

When $\theta = 56.4427°$,

$$\frac{x}{\sin(180 - 56.4427)°} = \frac{1.2}{\sin 30°}$$

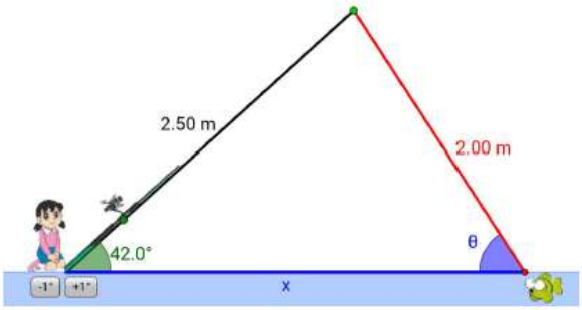
$x = 2.40$

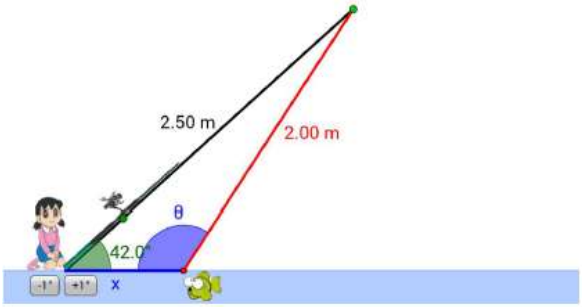
When $\theta = 123.557°$,

$$\frac{x}{\sin(180 - 123.557)°} = \frac{1.2}{\sin 30°}$$

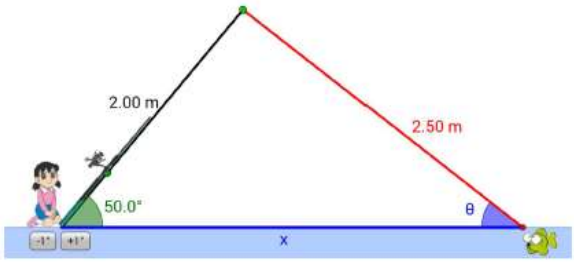
$x = 1.07$

1. Find the two possible sets of values of θ and $x$ in the figure.



2. Find the values of θ and $x$ in the figure.




3. In $\Delta ABC$, $\angle BAC = 40°$, $AB = 9$ and $BC = 7$. Find $\angle BCA$ and $AC$.

*4. In $\Delta ABC$, $\angle BAC = 60°$, $AB = 20$. Find the range of $BC$ such that $AC$ has two solutions.