Worksheet: Using the Cosine Rules

To Find a length:

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

$b^2 = a^2 + c^2 - 2ac\cos B$ Cosine Rule

$c^2 = a^2 + b^2 - 2ab\cos C$

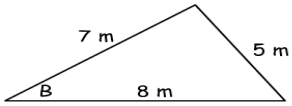
To Find an angle:

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

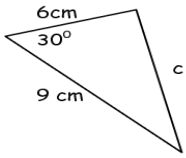
$\cos B = \frac{a^2 + c^2 - b^2}{2ac}$ Alternative form of cosine rule

$\cos C = \frac{b^2 + a^2 - c^2}{2ab}$

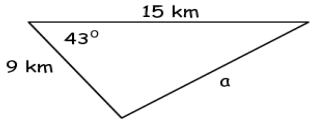
1. Calculate the size of angle B



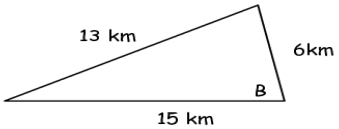
2. Calculate the length of line C



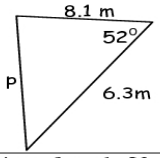
3. Calculate the size of length a



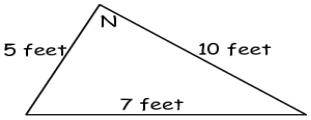
4. Calculate the size of angle B



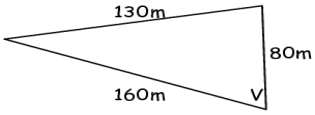
5. Calculate the size of length p



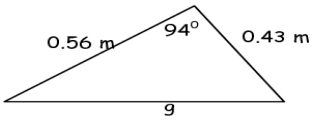
6. Calculate the size of angle N



7. Calculate the size of angle V



8. Calculate the size of length g



Diagrams are not drawn to scale