## Bearings - advanced

## Name: Class: Date:

1) Find the bearing from $X$ to $Y$

2) In the diagram below, Triangle ABC is isosceles and angle ABC is $90^{\circ}$.

Find the bearing of B from A .

3) In the diagram below, triangle $A B C$ is isosceles and angle $A B C$ is $90^{\circ}$.

Find the bearing from A to C , using 3 figures in your answer.

4) A lighthouse, $L$, is 2 km due East of a helicopter, $H$.

A ship, S , is 4 km due North of the lighthouse, L .
Find angle LHS, rounded to 1 decimal place.
5) Yeovil is 46.9 km due West of Mortown.

Yeovil is also 40.4 km due South of Gamtown.
Find the bearing of Mortown from Gamtown, rounded to the nearest degree.
6) Towns A and F are on bearings of $033^{\circ}$ and $127^{\circ}$ respectively from town B . $\mathrm{BA}=10 \mathrm{~km} . \mathrm{BF}=20 \mathrm{~km}$.

Find the
a) distance AF b) bearing of F from A
giving your answers to 3 significant figures.
7) A helicopter flies on a bearing of $039^{\circ}$ from P to Q , where $\mathrm{PQ}=39 \mathrm{~km}$. It then flies for 40 km to a point R . Given that R is 35 km from P , calculate the bearings of $x$ and $y$ giving your answers to the nearest whole number.

8) A helicopter flies on a bearing of $020^{\circ}$ from $S$ to $T$, where $S T=32 \mathrm{~km}$. It then flies for 33 km to a point $U$. Given that $U$ is 35 km from $S$, calculate a) the bearing of $U$ from $T$ and $\mathbf{b}$ ) the bearing of $S$ from $U$, giving your answers to the nearest whole number.

Solutions for the assessment Bearings - advanced

1) Bearing $=227^{\circ}$

2) Bearing $=045^{\circ}$
3) Bearing $=090^{\circ}$
4) angle $\mathrm{LHS}=63.4^{\circ}$
5) Bearing $=131^{\circ}$
6) a) 23.0 km , b) $153^{\circ}$
7) The bearing of $x$ is $166^{\circ}$ and $y$ is $284^{\circ}$
8) 

a) The bearing of U from T is $135^{\circ}$
b) The bearing of $S$ from $U$ is $259^{\circ}$

