Full Name: …….. **Date: ……**

Short Assessment 2

Time Allowed: 20 minutes **Total Marks: 20**

1. Rationalise the denominator:

$$\frac{1-\sqrt{5}}{2+3\sqrt{5}}$$

……
(3 marks)

2. Show that $\frac{\sqrt{3}+\sqrt{27}}{\sqrt{2}}$ can be expressed in the form $\sqrt{k}$ where k is an integer.

State the value of k.

$k =$ .....

(3 marks)

3.

$(3+\sqrt{a})(4+\sqrt{a})=17+k\sqrt{a}$ where a and k are positive integers.

Find the value of a and the value of k.

a =.....

k =.....

(3 marks)

4.

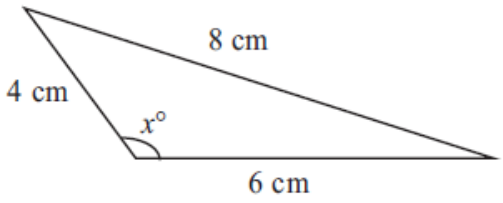


Diagram **NOT** accurately drawn

Calculate the value of x.
Give your answer correct to 1 decimal place.

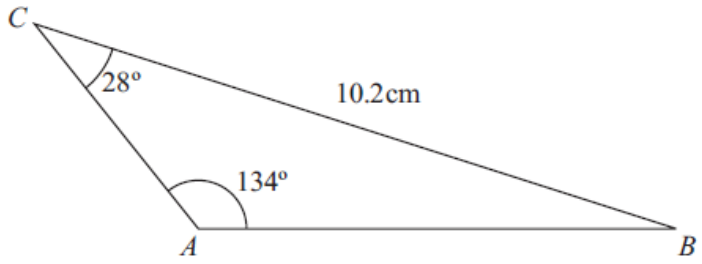
.....

(3 marks)

5.

The diagram shows triangle ABC.

Diagram **NOT** accurately drawn



Angle $BCA = 28°$
Angle $CAB = 134°$
$BC = 10.2$ cm.

Calculate the length of AB.
Give your answer correct to 3 significant figures.

..... cm

(3 marks)

Question 6 is on the next page.

6.

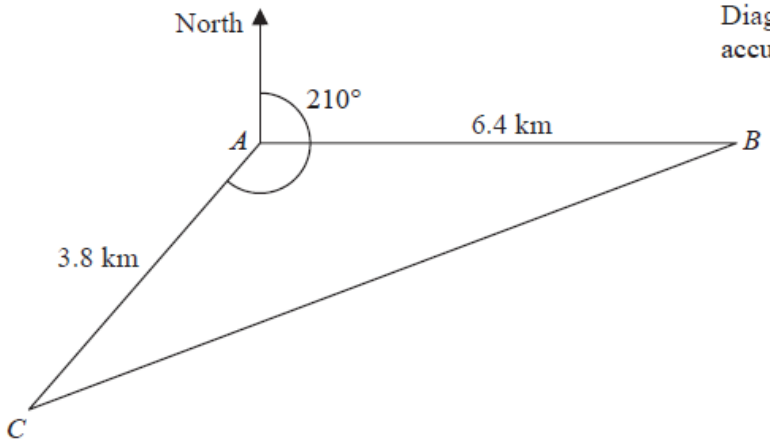


Diagram **NOT** accurately drawn

A, *B* and *C* are 3 villages.
B is 6.4 km due east of *A*.
C is 3.8 km from *A* on a bearing of 210°

Calculate the bearing of *B* from *C*.
Give your answer correct to the nearest degree.
Show your working clearly.

.....°

(5 marks)

- End of Test -