**Stage 1 - General Mathematics Trigonometry Re-Test**

Unless otherwise stated, give all answers to 1 decimal place.

**1** Find the value of x in each of the following by using Pythagoras.

**a b**



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**2** Find the value of *x* in each of the following by using SOH CAH TOA.

**a b**





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**3** For the following triangle,

**a** Find the area of the triangle by using the sine rule.

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**b** Find the value of x by using the cosine rule.

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**4** For the following triangle,



**a** Find the area of the triangle by using Heron’s rule.

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**b** Find the angle at C by using the cosine rule.

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**5** For each of the following, find the value of x using the sine rule.

**a b**



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**6** A plane takes off from the airport and flies for 17km due south. It then turns to head on a bearing of 210 degrees, and travels for a an additional 40km.

**a** How far from the airport is the plane?

**b** From the airport, what is the bearing to the plane?

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**7** From the foot of the Eiffel tower I have to look upwards at an angle of 17° to sight the top of a tree. From the top of the Eiffel tower, which is 300m tall, I have to look down at an angle of 81° below the horizontal to sight the tree top.

 **a** How tall is the tree?

 **b** How far away from the base of the Eiffel tower is the tree?

 **c** If I was standing on the platform, only 55.5m of the way up the tower, at what angle would I have to look down below the horizontal to sight the top of the tree?

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