**End of Unit Test** Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Lines, Angles and Shapes - HIGHER**

**1.** These two triangles are congruent. Not drawn accurately

 

 (a) What is the size of angle *P*? Circle your answer.

47°                    49°                    84°                 none of these

**(1)**

(b) What is the length of *PR*? Circle your answer.

5 cm                8 cm                10 cm                none of these

**(1)**

**(Total 2 marks)**

**2.** *ABCD* and *AEFG* are identical squares. *CD* = *EF* = 10 cm. Angle *BAG* = 45°. Not drawn accurately.



Prove that triangles *AGD* and *ABE* are congruent.

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**(Total 4 marks)**

**3.** *A*, *B* and *C* are points on a circle. *PAQ* is a tangent to the circle. Not drawn accurately. Work out the size of angle *CAB*.

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Answer ..................................................................... degrees

**(Total 3 marks)**

**4.** (a) *E, F* and *G* are points on a circle, centre *O*. Not drawn

accurately. Work out the size of angle *w*.

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Answer ..................................................................... degrees

**(2)**

(b) *A, B, C* and *D* are points on the circumference of the circle. Not drawn accurately. Work out the size of angle *x*. Give a reason for your answer.

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Answer ..................................................................... degrees

Reason ………………………………………………………………………………………

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**(2)**

(c) *PTQ* is a tangent to the circle. *R, S* and *T* are points on the circle. Not drawn accurately. Write down the size of angle *y*. Give a reason for your answer.

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Answer ………………………………………degrees

Reason ………………………………………………………………………………………

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**(2)**

**(Total 6 marks)**

**5.** *AC* is a diameter of a circle, centre *O*. *CTS* is a tangent to the circle. *B* is a point on the circumference of the circle such that *BC* = *BT.* Angle *BTS* = *y.* Not drawn accurately

(a) Prove that angle *CAB* = 180° – *y.* Give reasons for any angles you write down or calculate.

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 **(3)**

(b) You are given that angle *ACB* = 20°. Work out the value of *y*. You **must** show your working which may be on the diagram.

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Answer .................................................................... degrees

**(2)**

**(Total 5 marks)**

**(Total for test = 20 marks)**