**Lines, Angles and Shapes (H)**

Pre-Intervention Assessment

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Class: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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| **Question** | **Objective** | **RAG** |
|  1 | Calculate interior and exterior angles of a regular polygon |  |
|  2 | Use the conditions for congruent triangles in formal geometrical proofs |   |
|  3 | Understand the relationship between a radius and a tangent |   |
|  4 | Apply circle theorems |   |

**1.** The diagram shows a square and 4 regular

pentagons.

Work out the size of the angle marked x.



**2.** Diagram not drawn accurately.

In the diagram,

ADE is a right-angled triangle,

ABCD and AEFG are squares.

Prove that triangle ABE is congruent to triangle ADG.

**3.** A, B and D are points on the circumference of a circle, centre O.

BOD is a diameter of the circle.

BC and AC are tangents to the circle.

 Angle OCB = 34°.

Work out the size of angle DOA.

**4.** A, B, C and D are points on the circumference of a circle, centre O.

AC is a diameter of the circle.

AC and BD intersect at E.

Angle CAB = 25°

Angle DEC = 100°

Work out the size of angle DAC.

You must show all your working.

[Glue here]