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

Pre-Intervention Assessment

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

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

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

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| **Question** | **Objective** | **RAG** |
|  1 | Know angles around a point add up to 360° and angles on a straight line and angles in a triangle add up to 180° |  |
|  2 | Solve problems involving corresponding, alternate and supplementary angles |   |
|  3 | Calculate interior and exterior angles of a regular polygon |   |
|  4 | Use the conditions for congruent triangles in formal geometrical proofs |   |

**1.** ABC is a straight line.

AB = BD

Angle BAD = 25°

Angle BCD = 70°

Work out the size of the angle marked x.

Give reasons for your answer.

**2.** ABC is a straight line.

DEFG is a straight line.

AC is parallel to DG.

EF = BF.

Angle BEF = 50°.

Work out the size of the angle marked x.

Give reasons for your answer.

**3.** The diagram shows a square and 4 regular pentagons.

Work out the size of the angle marked x.



**4.** 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.

[Glue here]