**Straight Line Geometry**

Today we learnt that *angles on a straight line are supplementary*. In other words, if adjacent angles form a straight line, then the sum of those angles is 180°. Additionally, we saw that the *angles in a triangle are supplementary*. When we add up all three angles in a triangle, the sum of those angles is 180°.

Use these facts to **find the unknown angles** in the following questions. Write up the answers in your book, setting them out neatly and always giving reasons. Do **not** simply write the answer as a single number; show the **entire process you used** to get to that number.

1. ![Diagram 1](image1.png)
2. ![Diagram 2](image2.png)
3. ![Diagram 3](image3.png)

4. In question 3, there are two angles both called \( \angle ABC \). One is the angle that is made by adding together \( \angle ABE \), \( \angle EBD \) and \( \angle DBC \). What is the size of the other \( \angle ABC \), on the right side of the line?

5. Therefore, what is the sum of the adjacent angles on both sides of a line?

*These are also called 'angles at a point' because they are all formed around a single common point.*

6. ![Diagram 4](image4.png)
7. ![Diagram 5](image5.png)
8. ![Diagram 6](image6.png)

These questions are due on **Monday, 20 October 2008**.