|  |  |  |
| --- | --- | --- |
| **Topic/Skill**  | **Definition/Tips** | **Example****Topic: Angles**  |
| 1. Types of Angles | **Acute** **angles** are less than 90°.**Right angles** are exactly 90°.**Obtuse** **angles** are greater than 90° but less than 180°.**Reflex** **angles** are greater than 180° but less than 360°. |  |
| 2. Angle Notation | Can use **one lower-case** letters, eg. $θ$ or $x$Can use **three upper-case** letters, eg. $BAC$ | Image result for angle notation |
| 3. Angles at a Point  | **Angles around a point add up to 360°**.So here $a+b+c+d=180°$ |  |
| 4. Angles on a Straight Line | **Angles around a point on a straight line add up to 180°**. {so here$ x+y=180°\}$ |  |
| 5. Opposite Angles | **Vertically opposite angles are equal**.  |  |
| 6. Alternate Angles | **Alternate angles are equal**.They look like Z angles, but never say this in the exam. |  |
| 7. Corresponding Angles | **Corresponding angles are equal**.They look like F angles, but never say this in the exam. |  |
| 8. Co-Interior Angles | **Co-Interior angles add up to 180°**. They look like C angles, but never say this in the exam. Also called Allied Angles |  |
| 9. Angles in a Triangle | **Angles in a triangle add up to 180°.** | Image result for angles in a triangle |
| 10. Types of Triangles | **Right Angle** Triangles have a **90°** angle in.**Isosceles** Triangles have **2 equal sides** and **2 equal base angles**.**Equilateral** Triangles have **3 equal sides** and **3 equal angles (60°)**.**Scalene** Triangles have **different sides** and **different angles**.**Base angles in an isosceles triangle are equal.** |  |
| 11. Angles in a Quadrilateral | **Angles in a quadrilateral add up to 360°.** | Image result for angles in a quadrilateral |
| 12. Polygon | A **2D** shape with **only** **straight edges**. | Rectangle, Hexagon, Decagon, Kite etc. |
| 13. Regular | A shape is regular if all the **sides** and all the **angles** are **equal**. |   |
| 14. Names of Polygons | **3**-sided = **Triangle****4**-sided = **Quadrilateral****5**-sided = **Pentagon****6**-sided = **Hexagon****7**-sided = **Heptagon**/Septagon**8**-sided = **Octagon****9**-sided = **Nonagon****10**-sided = **Decagon** | Image result for irregular polygons |
| 15. Sum of Interior Angles | $$(n-2)×180$$where n is the number of sides. | Sum of Interior Angles in a Decagon = $\left(10-2\right)×180=1440°$ |
| 16. Size of Interior Angle in a Regular Polygon | $$\frac{(n-2)×180}{n}$$You can also use the formula: $$180-Size of Exterior Angle$$ | Size of Interior Angle in a Regular Pentagon = $$\frac{(5-2)×180}{5}=108°$$ |
| 17. Size of Exterior Angle in a Regular Polygon | $$\frac{360}{n}$$You can also use the formula: $$180-Size of Interior Angle$$ | Size of Exterior Angle in a Regular Octagon = $$\frac{360}{8}=45°$$ |

**Knowledge Organiser**