Topic: Angles

Topic/Skill	Definition/Tips	Example
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°.	Acute Right Obtuse Reflex
2. Angle Notation	Can use one lower-case letters, eg. θ or x Can use three upper-case letters, eg. BAC	$A \leftarrow \theta$ C
3. Angles at a Point	Angles around a point add up to 360°.	$\begin{vmatrix} d & a \\ c & b \end{vmatrix}$ $a+b+c+d=360^{\circ}$
4. Angles on a Straight Line	Angles around a point on a straight line add up to 180° .	$x = y$ $x + y = 180^{\circ}$
5. Opposite Angles	Vertically opposite angles are equal.	$\frac{x/y}{y/x}$
6. Alternate Angles	Alternate angles are equal. They look like Z angles, but never say this in the exam.	<i>y x x y</i>
7. Corresponding Angles	Corresponding angles are equal. They look like F angles, but never say this in the exam.	y/x
8. Co-Interior Angles	Co-Interior angles add up to 180°. They look like C angles, but never say this in the exam.	y/x x/y

9. Angles in a Triangle	Angles in a triangle add up to 180°.	B 45° C
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.	Right Angled Isosceles 60° 60° Equilateral Scalene
11. Angles in a Quadrilateral	Angles in a quadrilateral add up to 360°.	75° 75° 93°
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	Triangle Quadrilateral Pentagon Hexagon Hexagon Octagon Nonagon Decagon
15. Sum of Interior Angles	$(n-2) \times 180$ where n is the number of sides.	Sum of Interior Angles in a Decagon = $(10-2) \times 180 = 1440^{\circ}$
16. Size of Interior Angle in a Regular Polygon	$\frac{(n-2)\times 180}{n}$ You can also use the formula:	Size of Interior Angle in a Regular Pentagon = $\frac{(5-2) \times 180}{5} = 108^{\circ}$

	180 – Size of Exterior Angle	
17. Size of	360	Size of Exterior Angle in a Regular
Exterior Angle	\overline{n}	Octagon =
in a Regular		$\frac{360}{8} = 45^{\circ}$
Polygon	You can also use the formula:	${8} = 45$
	180 – Size of Interior Angle	-