

ANSWERS FOR: Angles in Polygons – W/C 4th May 2020

Task 1: Copy and complete the table below in your book:

| Number of sides n | Name | Sum of exterior angles $(n - 2) \times 180$ | For Regular Polygons | |
|----------------------|---------------|--|--------------------------------|--|
| | | | Interior angle Sum \div n | Exterior Angle $360 \div n$ (or $180 - \text{Int angle}$) |
| 3 | Triangle | 180° | $180 \div 3 = 60^\circ$ | $360 \div 3 = 120^\circ$ |
| 4 | Quadrilateral | $(4-2) \times 180 = 360^\circ$ | $360 \div 4 = 90^\circ$ | $360 \div 4 = 90^\circ$ |
| 5 | Pentagon | $(5-2) \times 180 = 540^\circ$ | 108° | 72° |
| 6 | Hexagon | $(6-2) \times 180 = 720^\circ$ | 120° | 60° |
| 7 | Heptagon | $(7-2) \times 180 = 900^\circ$ | 128.6° | 51.4° |
| 8 | Octagon | $(8-2) \times 180 = 1080^\circ$ | 135° | 45° |
| 10 | Decagon | $(10-2) \times 180 = 1440^\circ$ | 144° | 36° |

Remember that the interior and exterior angle always add up to 180°