



| Q  | Answer                                                                                                                                                                                                                                                                                                                                                | Marks |
|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
| 1  | a) $55^\circ$ b) $91^\circ$                                                                                                                                                                                                                                                                                                                           | 2     |
| 2  | a) $45^\circ$ b) $135^\circ$                                                                                                                                                                                                                                                                                                                          | 2     |
| 3  | 12                                                                                                                                                                                                                                                                                                                                                    | 2     |
| 4  | $144^\circ$                                                                                                                                                                                                                                                                                                                                           | 3     |
| 5  | a) $900^\circ$ b) $116^\circ$ c) $84^\circ$                                                                                                                                                                                                                                                                                                           | 4     |
| 6  | $69^\circ$                                                                                                                                                                                                                                                                                                                                            | 4     |
| 7  | 15                                                                                                                                                                                                                                                                                                                                                    | 3     |
| 8  | a) Each interior angle is $120^\circ$ , and $3 \times 120^\circ = 360^\circ$ , so three hexagons fit exactly round a point. b) Each interior angle is $108^\circ$ ; $3 \times 108^\circ = 324^\circ$ leaves a gap and $4 \times 108^\circ = 432^\circ$ overlaps, as 360 is not a multiple of 108. c) $135^\circ + 135^\circ + 90^\circ = 360^\circ$ . | 3     |
| 9  | $120^\circ$                                                                                                                                                                                                                                                                                                                                           | 3     |
| 10 | $160^\circ$                                                                                                                                                                                                                                                                                                                                           | 3     |
| 11 | $170^\circ$                                                                                                                                                                                                                                                                                                                                           | 4     |
| 12 | $72^\circ$                                                                                                                                                                                                                                                                                                                                            | 4     |

Full worked solutions, written out by hand, are on the solutions sheet for this topic.