



ACHIEVE ACADEMY

GCSE Maths — Foundation Tier

Angles & Parallel Lines · Practice Booklet

NAME: _____

CLASS: _____

DATE: _____

☐ Developing

☒ Secure

☐ Greater Depth

Answer every question in the working space provided. Method marks are available for correct working even if the final answer is wrong. Check the time allowed with your tutor before you start.

Angles & Parallel Lines

Total marks available: 64

● Angles & Parallel Lines

✓211°

Q1 · ● Developing · 2 marks

METHOD

Angles around a point sum to 360° .

$$? = 360 - (103 + 46) = 360 - 149 = 211^\circ$$

✓65°

Q2 · ● Developing · 2 marks

METHOD

Angles on a straight line sum to 180° .

$$? = 180 - (27 + 88) = 180 - 115 = 65^\circ$$

✓127°

Q3 · ● Developing · 2 marks

METHOD

Angles on a straight line sum to 180° .

$$? = 180 - (21 + 32) = 180 - 53 = 127^\circ$$

✓20°

Q4 · ● Developing · 2 marks

METHOD

Angles on a straight line sum to 180° .

$$? = 180 - (132 + 28) = 180 - 160 = 20^\circ$$

✓179°

Q5 · ● Developing · 2 marks

METHOD

Angles around a point sum to 360° .

$$? = 360 - (42 + 139) = 360 - 181 = 179^\circ$$

✓110°

Q6 · ● Developing · 2 marks

METHOD

Angles on a straight line sum to 180° .

$$? = 180 - (57 + 13) = 180 - 70 = 110^\circ$$

✓184°

Q7 · ● Developing · 2 marks

METHOD

Angles around a point sum to 360° .

$$? = 360 - (100 + 76) = 360 - 176 = 184^\circ$$

✓72°

Q8 · ● Developing · 2 marks

METHOD

Angles around a point sum to 360° .

$$? = 360 - (174 + 114) = 360 - 288 = 72^\circ$$

✓45°

Q9 · ● Developing · 2 marks

METHOD

Angles on a straight line sum to 180° .

$$? = 180 - (108 + 27) = 180 - 135 = 45^\circ$$

✓126°

Q10 · ● Developing · 2 marks

METHOD

Angles around a point sum to 360° .

$$? = 360 - (70 + 164) = 360 - 234 = 126^\circ$$

✓20°

Q11 · ● Secure · 2 marks

METHOD

Alternate angles are equal.

$$? = 20^\circ$$

✓20°

Q12 · ● Secure · 2 marks

METHOD

Vertically opposite angles are equal.

$$? = 20^\circ$$

✓40°

Q13 · ● Secure · 2 marks

METHOD

Vertically opposite angles are equal.

$$? = 40^\circ$$

✓105°

Q14 · ● Secure · 2 marks

METHOD

Alternate angles are equal.

$$? = 105^\circ$$

✓140°

Q15 · ● Secure · 2 marks

METHOD

Co-interior angles (also called allied angles) sum to 180° .

$$? = 180 - 40 = 140^\circ$$

✓55°

Q16 · ● Secure · 2 marks

METHOD

Co-interior angles (also called allied angles) sum to 180° .

$$? = 180 - 125 = 55^\circ$$

✓95°

Q17 · ● Secure · 2 marks

METHOD

Vertically opposite angles are equal.

$$? = 95^\circ$$

✓65°

Q18 · ● Secure · 2 marks

METHOD

Co-interior angles (also called allied angles) sum to 180° .

$$? = 180 - 115 = 65^\circ$$

✓130°

Q19 · ● Secure · 2 marks

METHOD

Vertically opposite angles are equal.

$$? = 130^\circ$$

✓120°

Q20 · ● Secure · 2 marks

METHOD

Co-interior angles (also called allied angles) sum to 180° .

$$? = 180 - 60 = 120^\circ$$

✓150°

Q21 · ● Greater Depth · 3 marks

METHOD

Sum of interior angles = $(n - 2) \times 180 = (12 - 2) \times 180 = 1800^\circ$

Each interior angle = $1800 \div 12 = 150^\circ$

✓60°

Q22 · ● Greater Depth · 2 marks

METHOD

Exterior angles of a regular polygon sum to 360° .

Each exterior angle = $360 \div 6 = 60^\circ$

✓30°

Q23 · ● Greater Depth · 2 marks

METHOD

Exterior angles of a regular polygon sum to 360° .

Each exterior angle = $360 \div 12 = 30^\circ$

✓108°

Q24 · ● Greater Depth · 3 marks

METHOD

Sum of interior angles = $(n - 2) \times 180 = (5 - 2) \times 180 = 540^\circ$

Each interior angle = $540 \div 5 = 108^\circ$

✓144°

Q25 · ● Greater Depth · 3 marks

METHOD

Sum of interior angles = $(n - 2) \times 180 = (10 - 2) \times 180 = 1440^\circ$

Each interior angle = $1440 \div 10 = 144^\circ$

✓72°

Q26 · ● Greater Depth · 2 marks

METHOD

Exterior angles of a regular polygon sum to 360° .
Each exterior angle = $360 \div 5 = 72^\circ$

✓36°

Q27 · ● Greater Depth · 2 marks

METHOD

Exterior angles of a regular polygon sum to 360° .
Each exterior angle = $360 \div 10 = 36^\circ$

✓40°

Q28 · ● Greater Depth · 2 marks

METHOD

Exterior angles of a regular polygon sum to 360° .
Each exterior angle = $360 \div 9 = 40^\circ$

✓140°

Q29 · ● Greater Depth · 3 marks

METHOD

Sum of interior angles = $(n - 2) \times 180 = (9 - 2) \times 180 = 1260^\circ$
Each interior angle = $1260 \div 9 = 140^\circ$

✓45°

Q30 · ● Greater Depth · 2 marks

METHOD

Exterior angles of a regular polygon sum to 360° .
Each exterior angle = $360 \div 8 = 45^\circ$