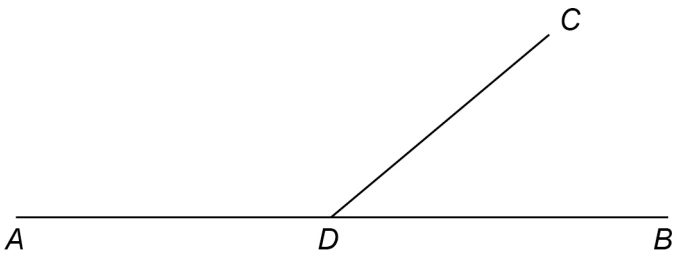
1 *ADB* and *CD* are straight lines.



Not drawn accurately

angle *ADC* = 5 × angle *CDB*

Work out the size of angle *ADC*.

[3 marks]

ADC : CDB = 5 : 1 (1)

180° ÷ 6 = 30° (1)

ADC : 5 × 30° = 150° (1)

Answer 150 degrees

2 In a **right-angled** triangle

smallest angle : largest angle = 2 : 5

Work out the three angles of the triangle.

[4 marks]

$180° - 90° = 90°$

$90° \div 5 = 18°$ (1)

$2 \times 18° = 36°$ (1)

$90° - 36° = 54°$

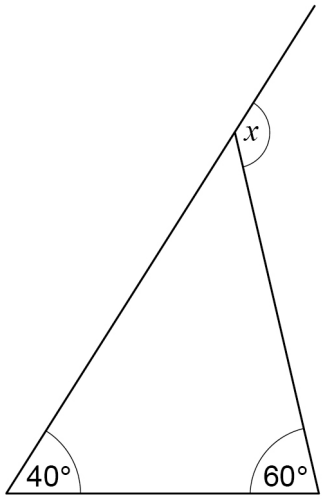
(1)

90 degrees

54 (1) degrees

36 degrees

3 One side of a triangle is extended.



Not drawn accurately

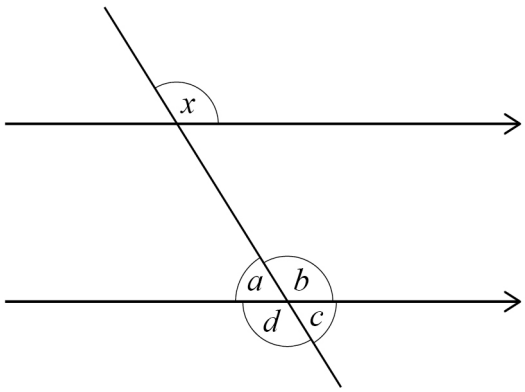
Circle the size of angle x.

[1 mark]

100° 80° 60° 40°

1

4 A straight line passes through two parallel lines.



Not drawn accurately

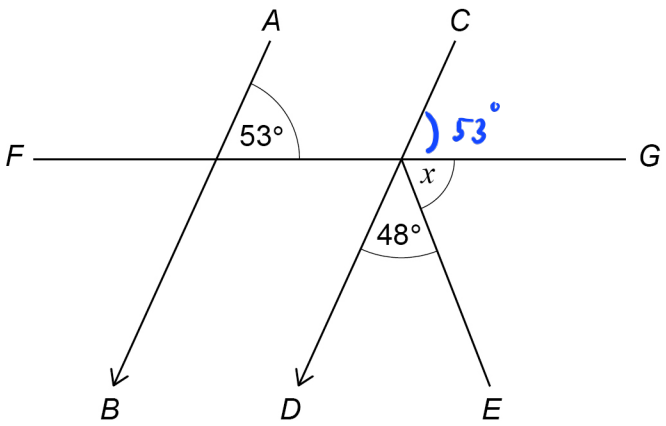
Circle the angle that is **corresponding** to angle x.

[1 mark]

a b c d

5 *AB* is parallel to *CD*.

FG is a straight line.



Not drawn accurately

Work out the size of angle x.

[3 marks]

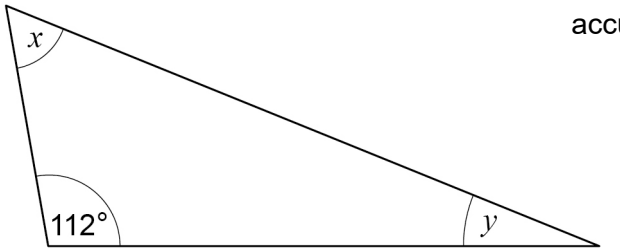
$x + 48 + 53 = 180$ (1)

$x = 180 - 48 - 53$ (1)

$= 79$ (1)

Answer 79 degrees

6 (a) Here is a different triangle.



Not drawn accurately

$x = 3y$

Work out the size of angle y.

[3 marks]

$x + y + 112^\circ = 180^\circ$

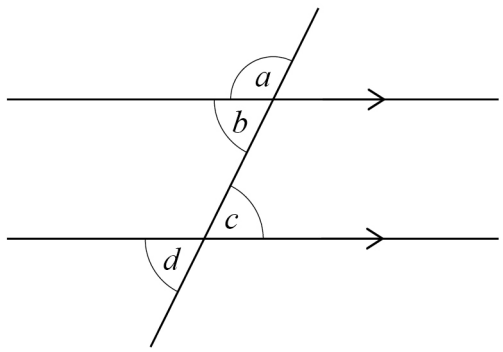
$3y + y = 180^\circ - 112^\circ$ (1)

$4y = 68^\circ$ (1)

$y = 17^\circ$

$y =$ 17 (1) °

7



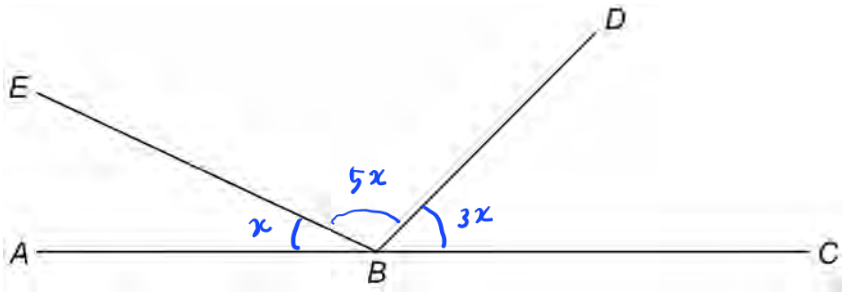
Circle the pair of alternate angles.

[1 mark]

a and b b and c c and d a and d

1

8 *ABC*, *BD* and *BE* are straight lines.



Not drawn accurately

angle *EBD* = 5 × angle *ABE*

angle *DBC* = 3 × angle *ABE*

Work out the size of angle *EBD*.

[3 marks]

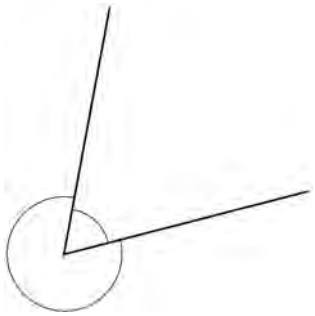
let ABE = x

total angle = x + 5x + 3x = 9x (1)

$EBD = \frac{5x}{9x} \times 180^\circ = 100^\circ$ (1) (1)

Answer 100 °

9 Two angles around a point are shown.



Not drawn accurately

The angles are in the ratio 2 : 7

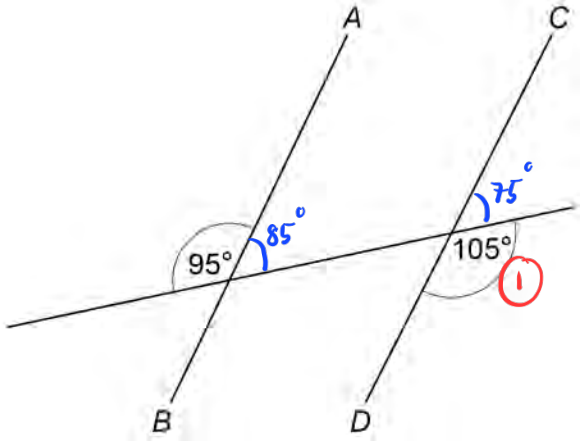
Show that the larger angle is 280°

[2 marks]

$2+7=9$

$\frac{7}{9} \times 360^\circ = 280^\circ$ (2)

10 Here are three straight lines.



Not drawn accurately

Are the lines *AB* and *CD* parallel?

Tick a box.

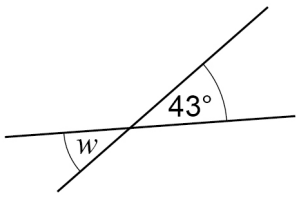
Yes ☐ No ☑ (1)

Show working to support your answer.

[2 marks]

11 (a) Here are two straight lines.

Not drawn accurately



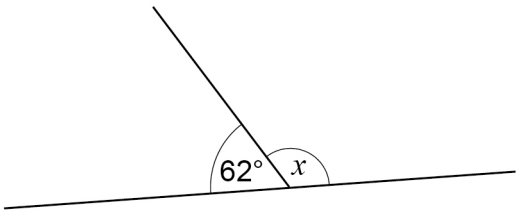
Write down the size of angle w.

[1 mark]

$w =$ 43 (1) degrees

11 (b) Here are two different straight lines.

Not drawn accurately



Work out the size of angle x.

[1 mark]

180 − 62 = 118

$x =$ 118 (1) degrees

11 (c) In a triangle, two of the angles are 51° and 74°.

Work out the size of the third angle.

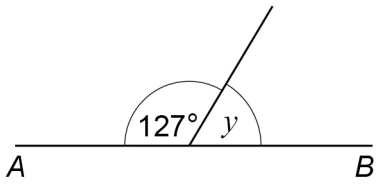
[1 mark]

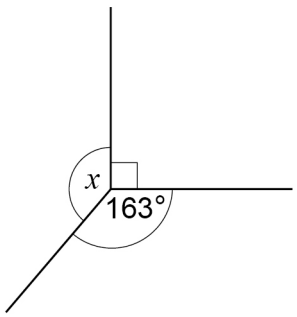
180 − 51 − 74 = 55

Answer 55 (1) degrees

12 *AB* is a straight line.

Not drawn accurately





Is y half of x ?

Tick a box.

Yes ☐ No ☑

Show working to support your answer.

[3 marks]

$y = 180^\circ - 127^\circ = 53^\circ$ ✓1

$x = 360^\circ - 90^\circ - 163^\circ$

$= 107^\circ$ ✓1

$\frac{x}{2} = \frac{107^\circ}{2} = 53.5^\circ$. y is not half of x .

✓1