FUNCTIONAL SKILLS MATHEMATICS

AQA | Edexcel | City & Guilds | Open Awards | NCFE | Highfield

Level 2

Circles

Materials
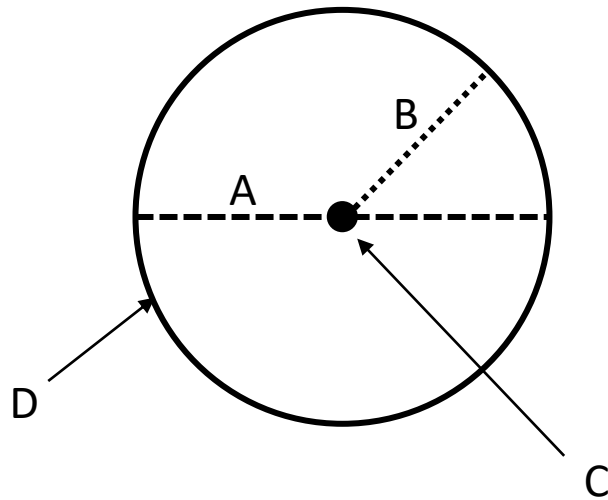- You **cannot** use a calculator for **questions** with this symbol.

Instructions
- Answer **all** questions.
- Answer questions on separate paper.

Information and Advice
- The marks for each question are shown in brackets – use this as a guide on how long to spend on each question.
- Read each question carefully before you answer it.
- Check you answers.

Q1   Use the circle below to identify key terminology:

1(a)   What does the letter A represent?

[1 mark]

1(b)   What does the letter B represent?

[1 mark]

1(c)   What does the letter C represent?

[1 mark]

1(d)   What does the letter D represent?

[1 mark]

4

Q2 Use $\pi = 3.14$ throughout.

Find:

2(a) The diameter of a circle of radius 1 m.

[1 mark]

2(b) The radius of a circle with diameter 10 cm.

[1 mark]

2(c) The circumference of a circle with radius 3 cm

[2 marks]

2(d) The circumference of a circle with diameter 28 cm

[2 marks]

2(e) The area of a circle with radius 0.5 m

[2 marks]

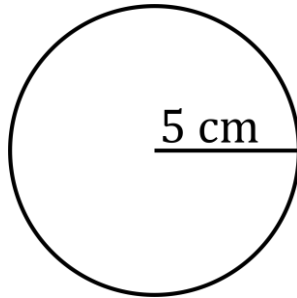**2(f)** The area of a circle with diameter 2 km

[2 marks]

2(g) The radius of a circle with circumference 314 m

[2 marks]

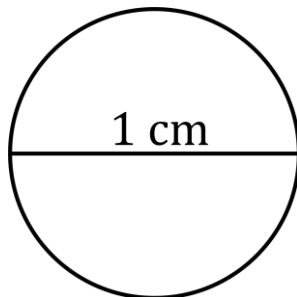**2(h)** The area of a circle with circumference 628 mm

[3 marks]

15

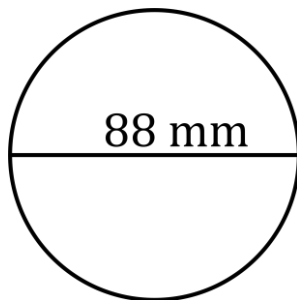**Q3**   Find the circumference of each of the circles below. Use $\pi = 3.14$ throughout.
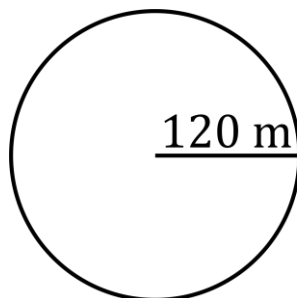
3(a)

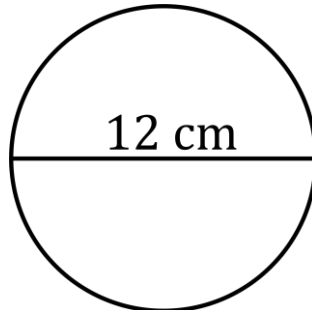5 cm

[2 marks]

3(b)

1 cm

[2 marks]

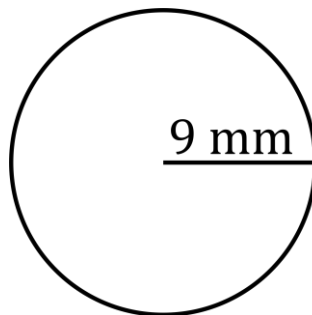**3(c)**

88 mm

[2 marks]

3(d)

120 m

[2 marks]

8

Turn over ▶

Q4 Find the area of each of the circles below. Use $\pi = 3.14$ throughout.
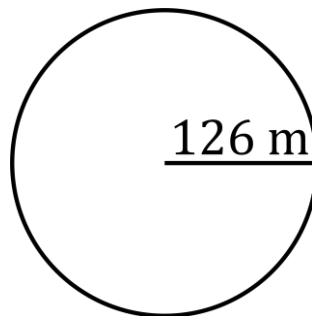
4(a)

12 cm

[2 marks]
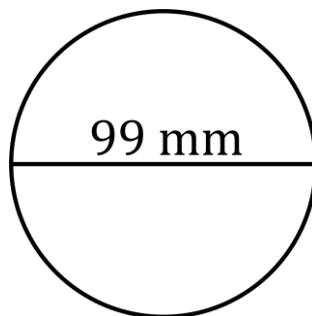
4(b)

9 mm

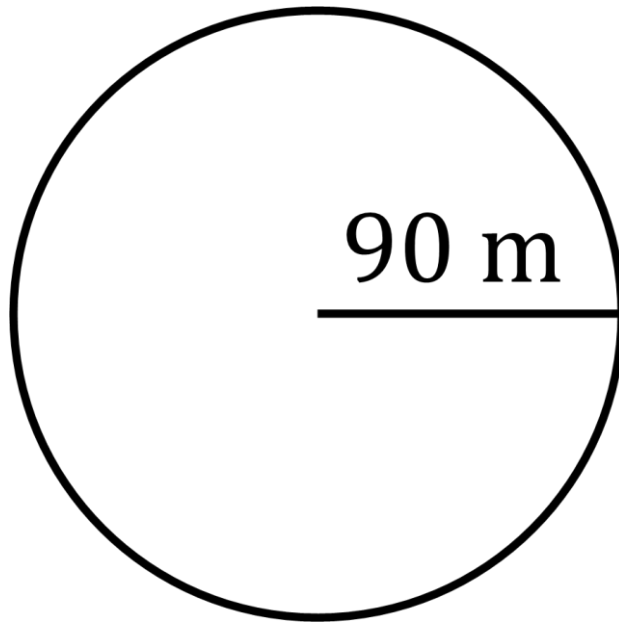[2 marks]

4(c)

126 m

[2 marks]

4(d)

99 mm

[2 marks]

8

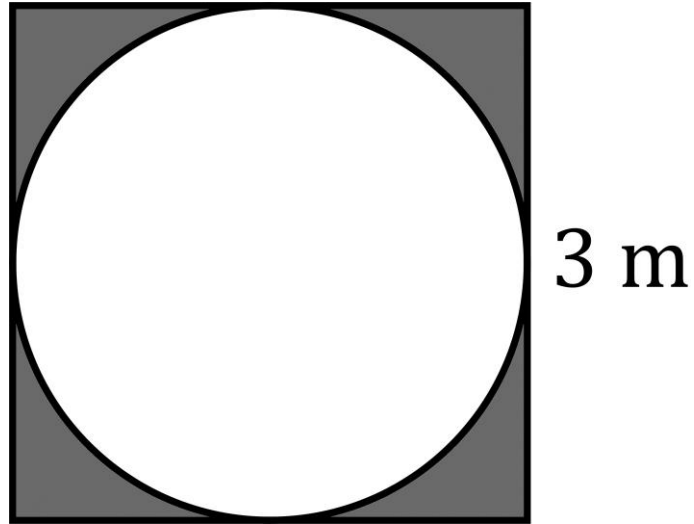**Q5**   This is a diagram of a farmer's field. Use $\pi = 3.14$ throughout.

90 m

5(a)   Sheep need 250 m² each to be reared effectively. How many sheep can the farmer rear?

[4 marks]

5(b)   Cows need 350 m² each to be reared effectively. How many cows can the farmer rear?

[2 marks]

Q6   Below is a circular clock face mounted onto a square wall. Use $\pi = 3.14$ throughout.

3 m

6(a)   What is the area of the clock face?

[3 marks]

6(b)   What is the area of the wall?

[2 marks]

6(c)   What is the area of the shaded region?

[2 marks]