FUNCTIONAL SKILLS MATHEMATICS

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

Entry Level 3

Scales

Materials

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

Instructions

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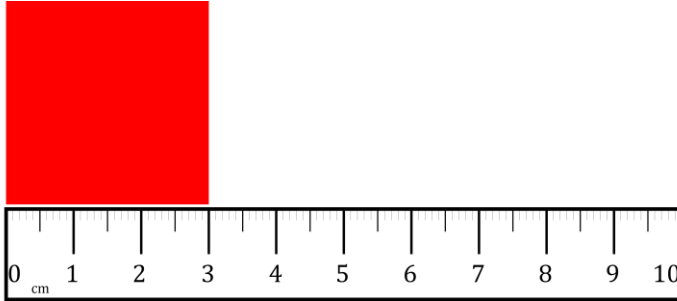- Answer questions on separate paper.

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.
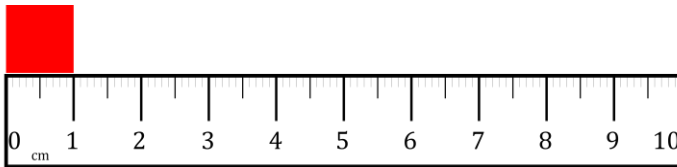- Read each question carefully before you answer it.
- Check you answers.

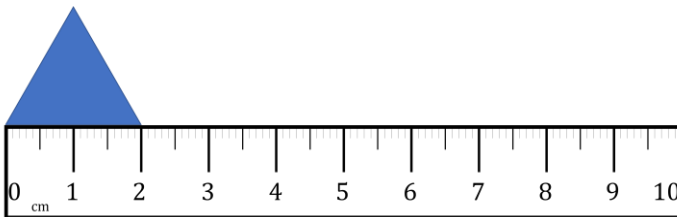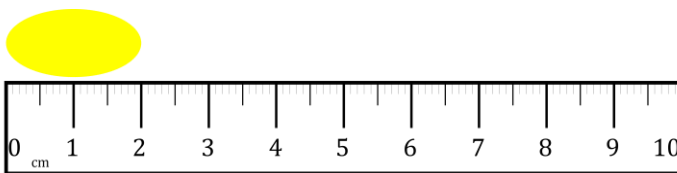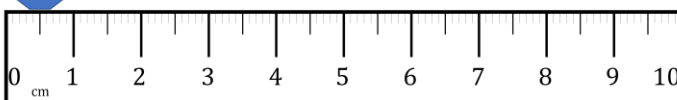**Q1**   Find the lengths of these shapes.

1(a)

[1 mark]

1(b)

[1 mark]

1(c)

[1 mark]

1(d)

[1 mark]

1(e)

[1 mark]

5

Q2   Find the lengths of these shapes.

2(a)
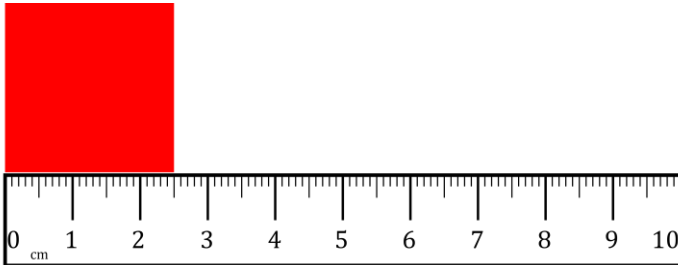
[1 mark]

2(b)
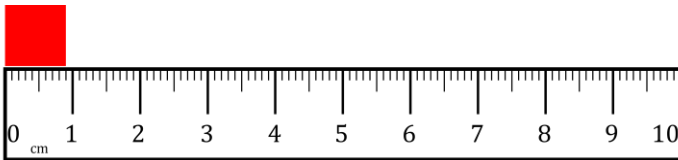
[1 mark]

2(c)
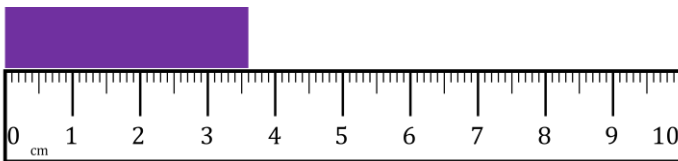
[1 mark]

2(d)

[1 mark]
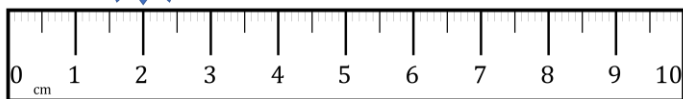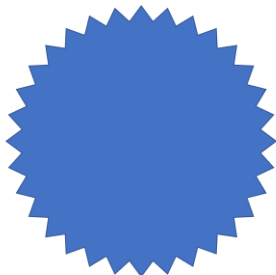
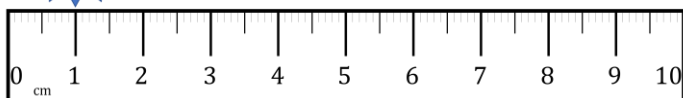**2(e)**

[1 mark]

5

Turn over ►
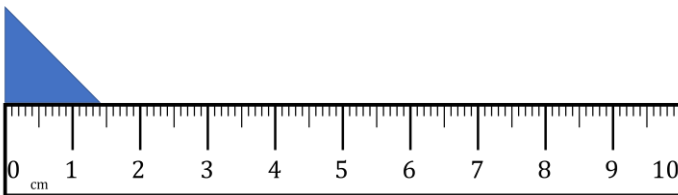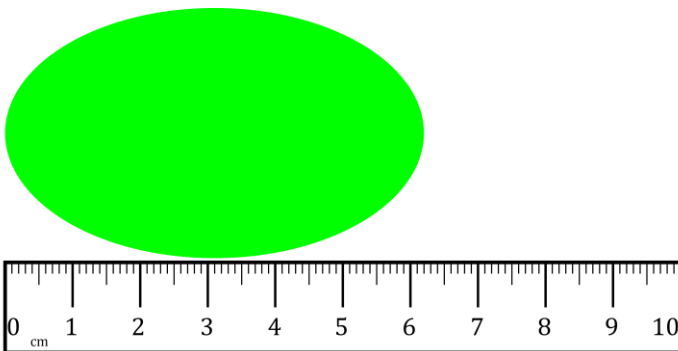
Q3   Lola is printing some stickers for her class, and has to decide on a size and shape.

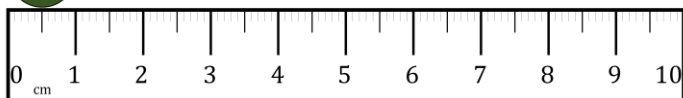**3(a)**   This is her first design. How long is it?

[1 mark]

3(b)   She instead tries a smaller design with less points. How long is this?

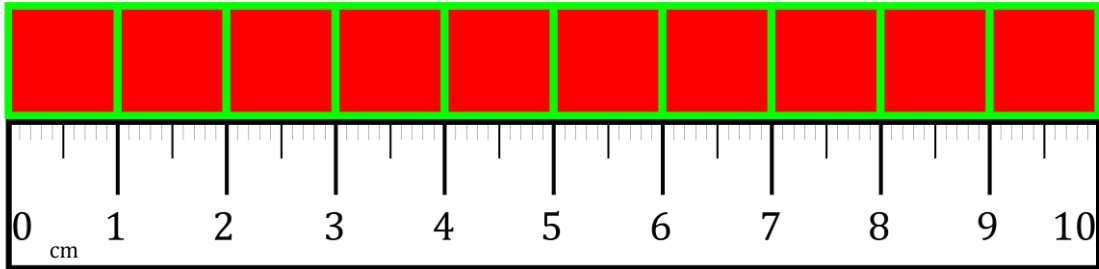[1 mark]

3(c)   In the end, she opts for a smile design. How long is it?

[1 mark]

Q4   Solomon has purchased some toy cubes for their child.

4(a)   How long is the string of 10 cubes?
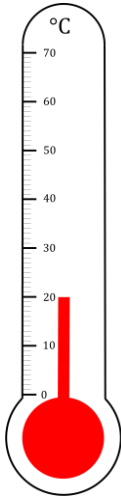
[1 mark]

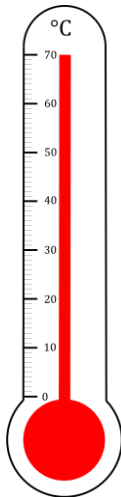**4(b)**   How long is 1 cube?

[1 mark]

Q5   What temperatures in degrees Celsius (°C) are being shown on these thermometers?
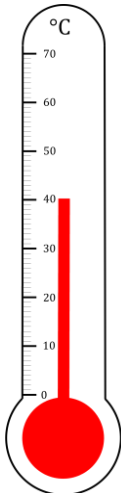
5(a)

[1 mark]

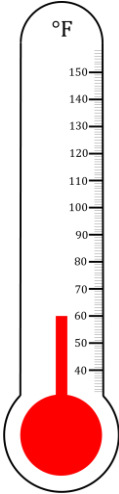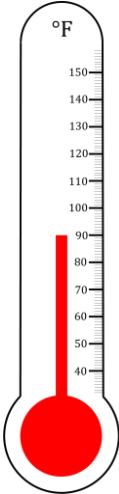**5(b)**

[1 mark]

5(c)

[1 mark]

Q6   What temperatures in degrees Fahrenheit (°F) are being shown on these thermometers?

6(a)
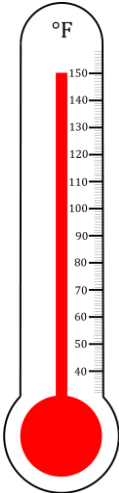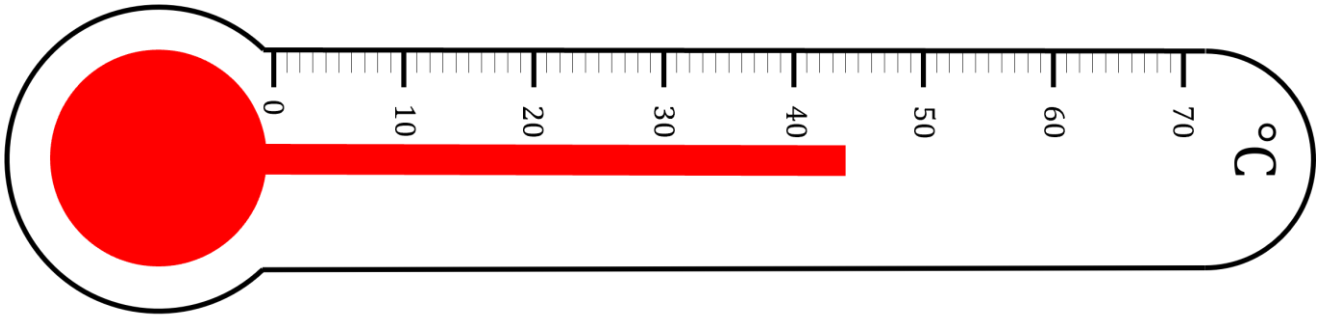
[1 mark]

6(b)

[1 mark]

6(c)

[1 mark]

3

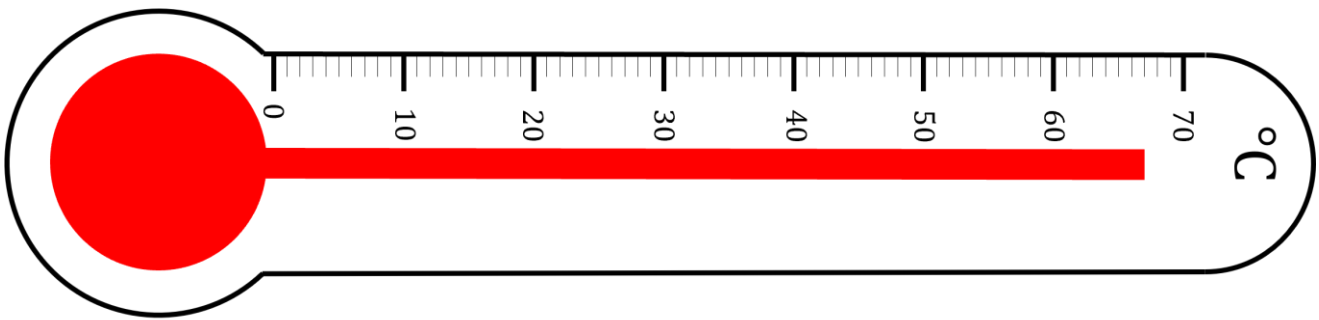**Q7**   What temperatures in degrees Celsius (°C) are being shown on these thermometers?

7(a)

[1 mark]

7(b)

[1 mark]

7(c)

[1 mark]

3
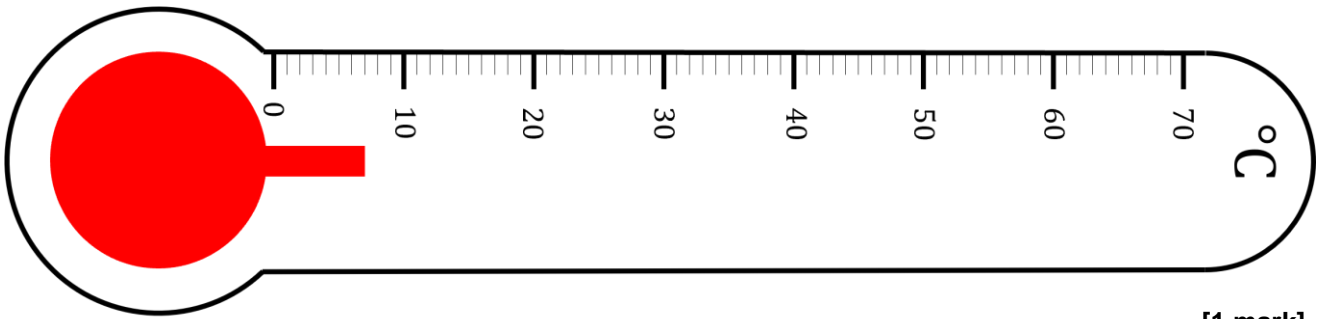
Q8 What temperatures in degrees Fahrenheit (°F) are being shown on these thermometers?

8(a)
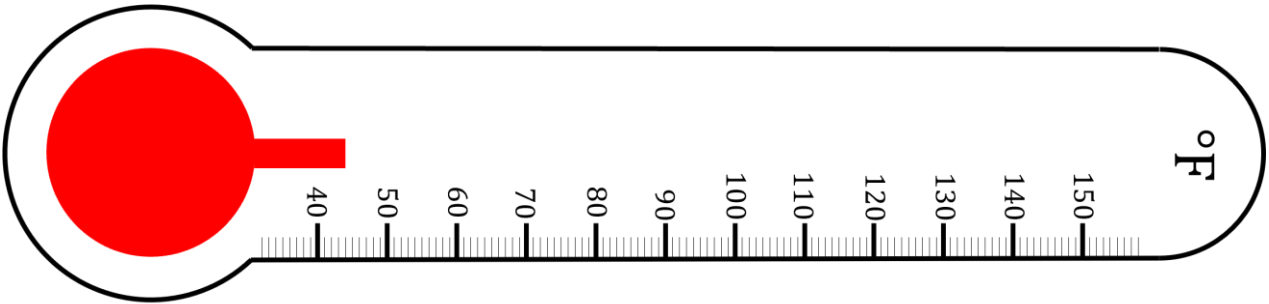
[1 mark]

8(b)

[1 mark]

8(c)

[1 mark]

Turn over ▶
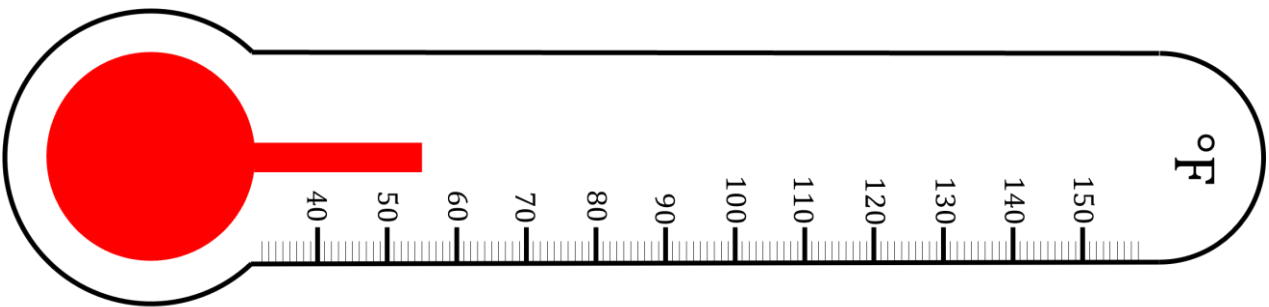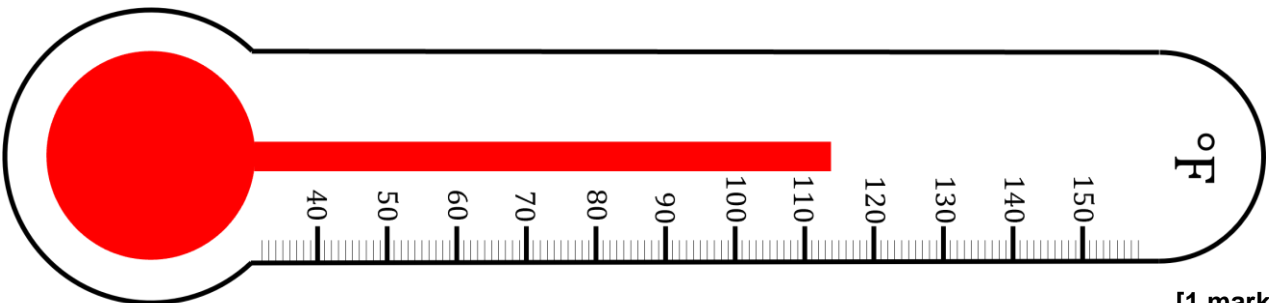
Q9 These thermometers show temperature in both degrees Celsius (°C) and degrees Fahrenheit (°F). State what they read on both scales.

9(a)
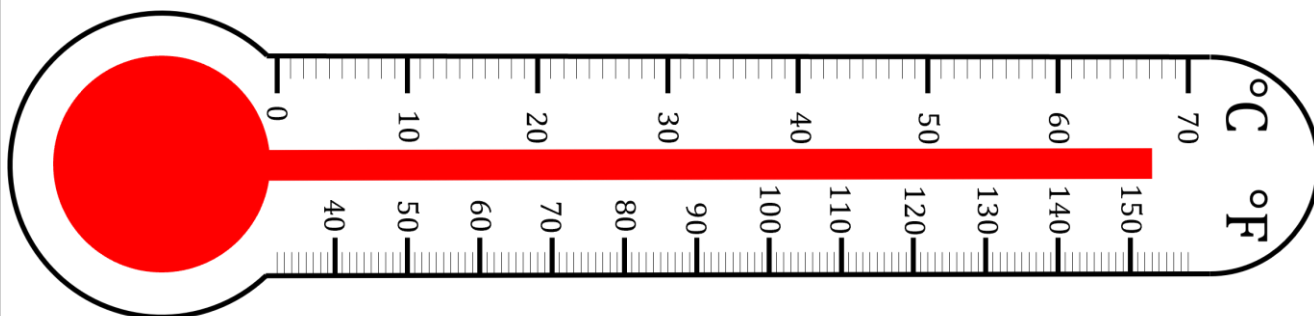
[2 marks]

9(b)
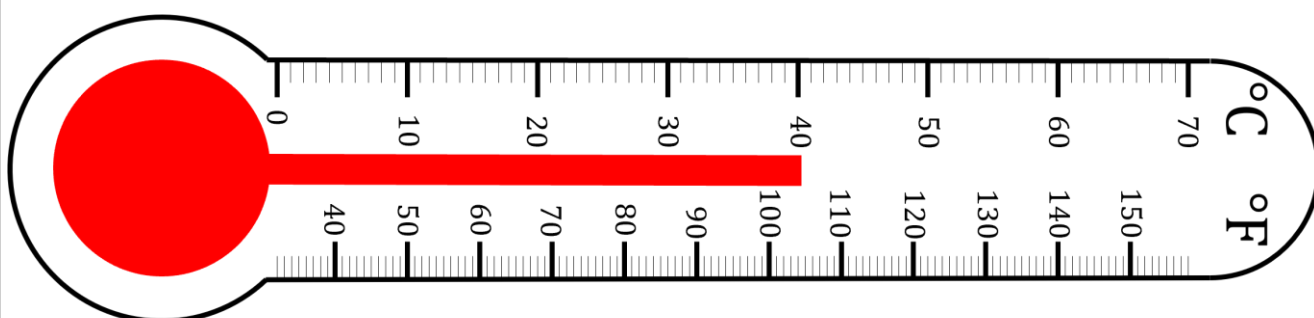
[2 marks]

9(c)
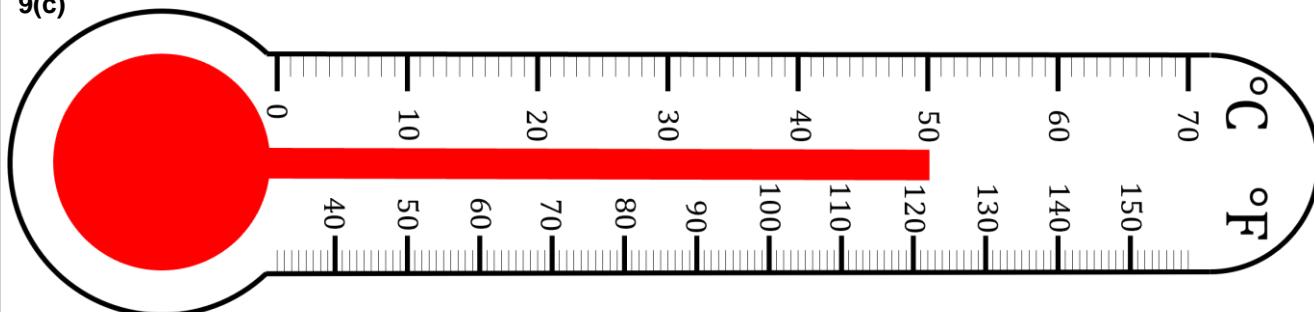
[2 marks]

Q10   Monica leaves her thermometer outside for one day, and checks it at the start and the end of the day.

10(a)   At the start of the day she observes this. What temperature is shown?

[1 mark]

10(b)   At the end of the day, she observes this. What temperature is shown and by how much in which direction has the temperature changed over the course of the day?

[2 marks]

Q11   Khasan is in Egypt. On a particularly hot day, he observes this on his thermometer.

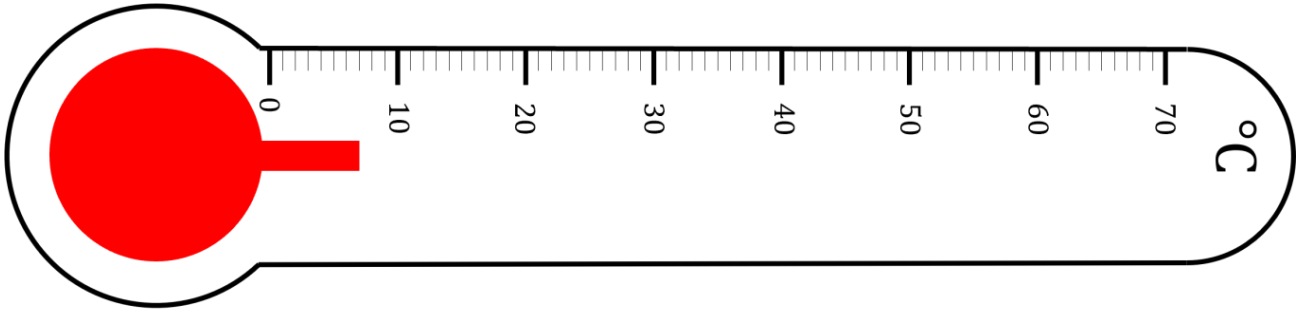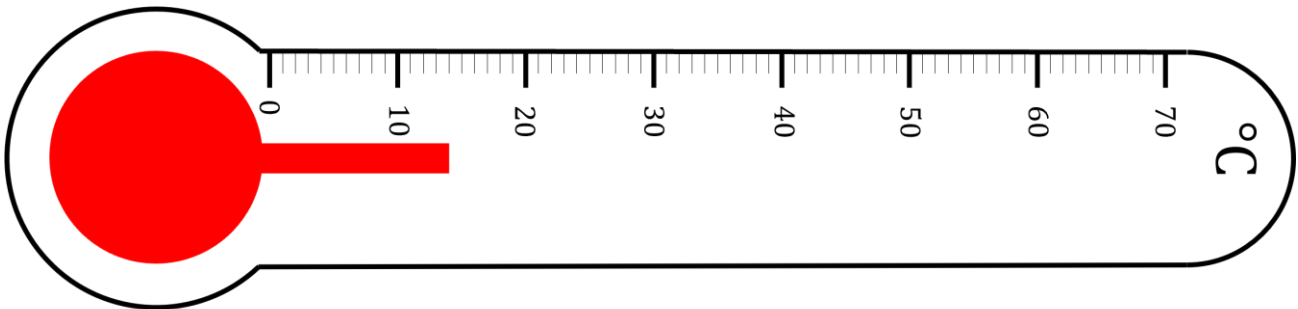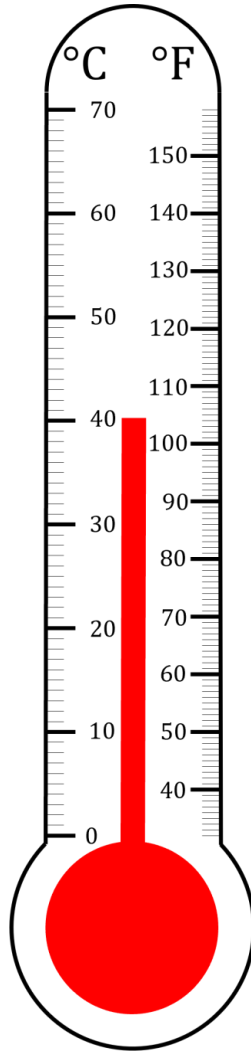**11(a)**   What temperature is shown? Give your answer in both degrees Celsius (°C) and degrees Fahrenheit (°F).

[2 marks]

11(b)   The temperature is set to drop by 18 degrees Fahrenheit in 12 hours.

11(b)(i)   What temperature will it be in Fahrenheit in 12 hours?

[1 mark]

11(b)(ii)   What temperature will it be in Celsius in 12 hours?

[1 mark]

11(b)(iii)   What is the temperature drop in Celsius?

[1 mark]

5

Turn over ▶

Q12   For each of the diagrams below, state the volume of liquid in the measuring cylinder.

12(a)
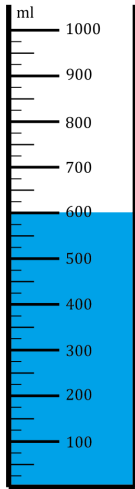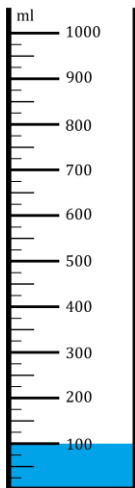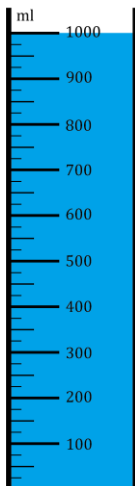
ml
— 1000
— 900
— 800
— 700
— 600
— 500
— 400
— 300
— 200
— 100

[1 mark]

12(b)

ml
— 1000
— 900
— 800
— 700
— 600
— 500
— 400
— 300
— 200
— 100

[1 mark]

12(c)

ml
— 1000
— 900
— 800
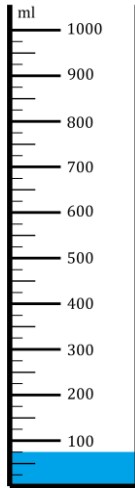— 700
— 600
— 500
— 400
— 300
— 200
— 100

[1 mark]

Turn over ►

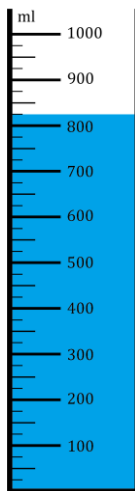**Q13**   For each of the diagrams below, state the volume of liquid in the measuring cylinder.

13(a)

ml
— 1000
— 900
— 800
— 700
— 600
— 500
— 400
— 300
— 200
— 100

[1 mark]

13(b)

ml
— 1000
— 900
— 800
— 700
— 600
— 500
— 400
— 300
— 200
— 100

[1 mark]

13(c)

ml
— 1000
— 900
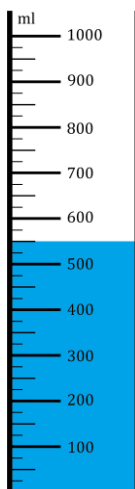— 800
— 700
— 600
— 500
— 400
— 300
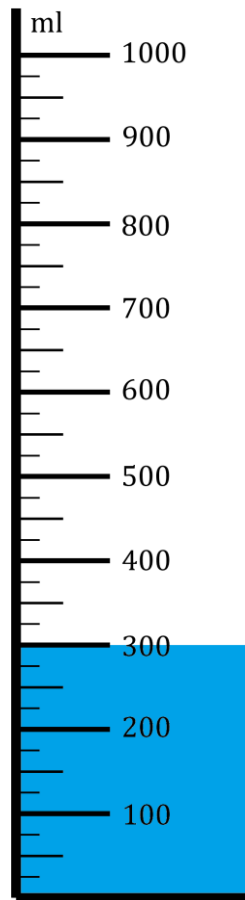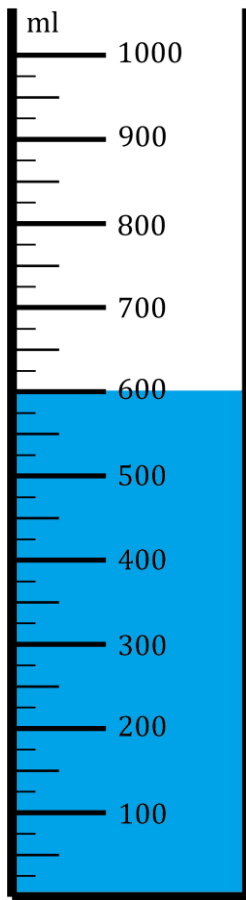— 200
— 100

[1 mark]

3

Turn over ►

Q14   Greta has two measuring cylinders, which are shown below:

14(a)   How much is in each measuring cylinder?

[2 marks]

14(b)   Half of the contents of the left measuring cylinder are poured into the right measuring cylinder. How much is in each measuring cylinder now?
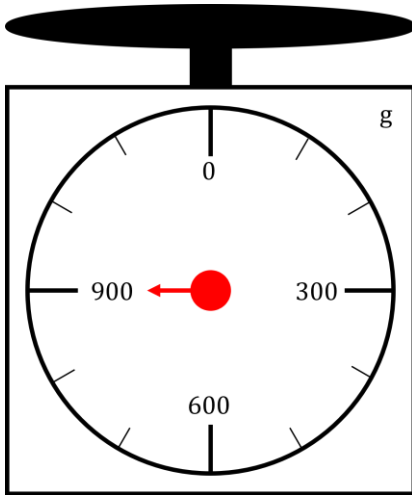
[3 marks]

14(c)   Later on, one third of the contents of the right measuring cylinder are poured into the left measuring cylinder. How much is in each measuring cylinder now?
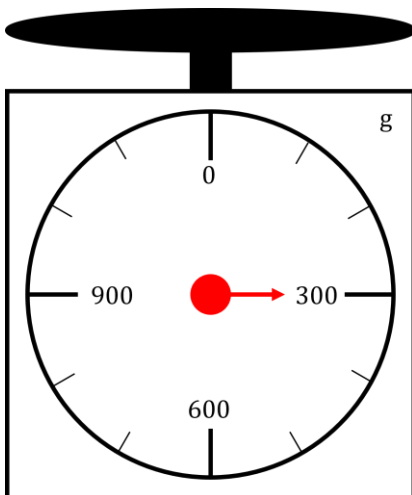
[3 marks]

8

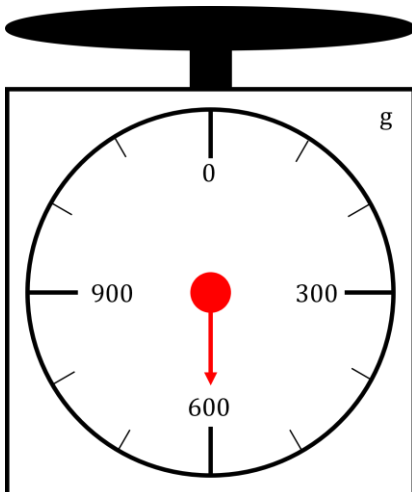Turn over ▶

Q15   What weights are displayed on these weighing scales?

15(a)

[1 mark]

15(b)

[1 mark]

15(c)

[1 mark]

3

Turn over ▶

Q16   What weights are displayed on these weighing scales?

16(a)

[1 mark]

16(b)

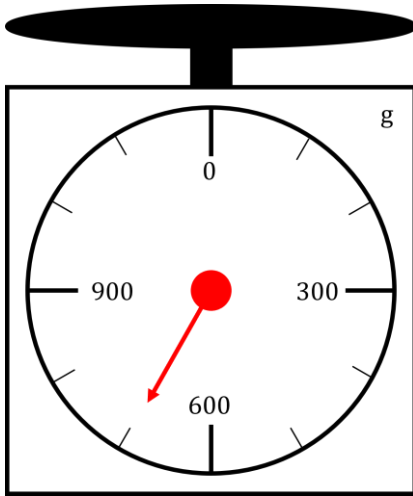
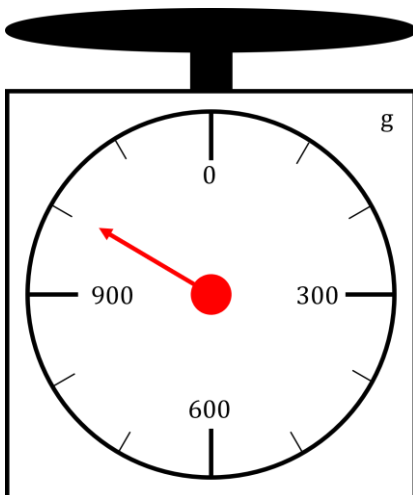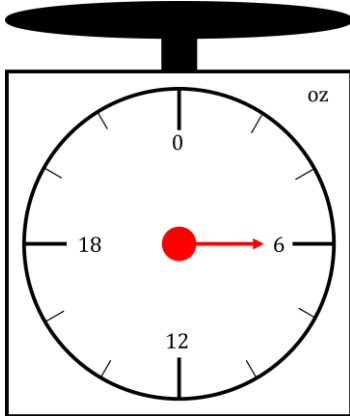**[1 mark]**

16(c)
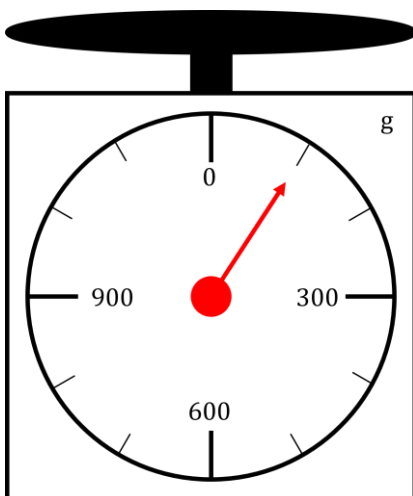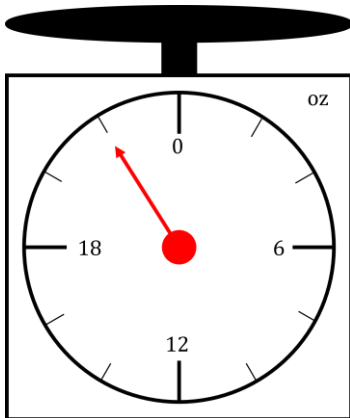

[1 mark]

Q17   What weights are displayed on these weighing scales?

17(a)

[1 mark]

17(b)

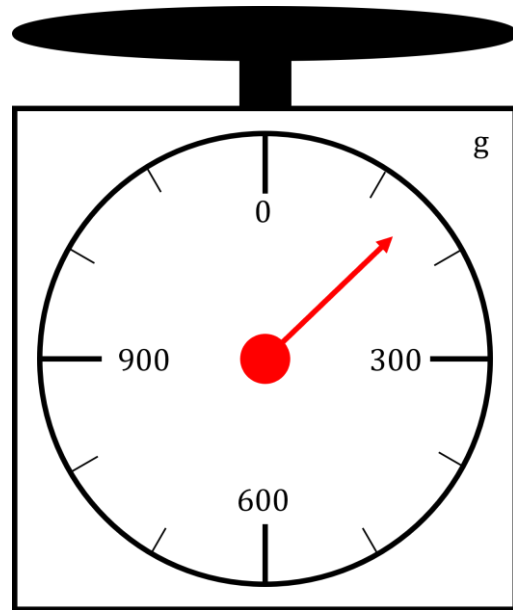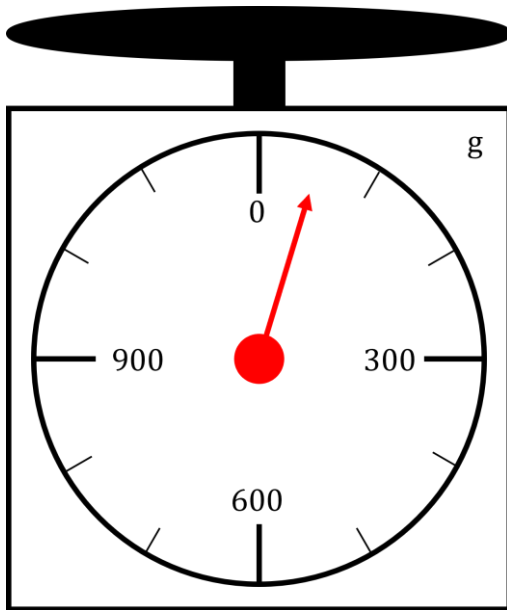[1 mark]

17(c)
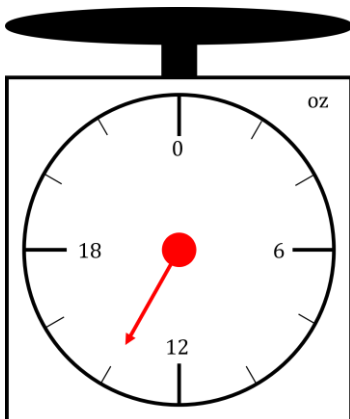
[1 mark]

17(d)   1 lb is 16 oz. Which of the above is heavier than 1 lb?

[1 mark]

4

Turn over ►

Q18   Below shows the weights of two apples.

18(a)   What does each apple weigh? What is the difference in weight of the apples?

[3 marks]

18(b)   When an apple rots it becomes lighter. Which apple is more likely to have gone rotten? Give a reason for your answer.
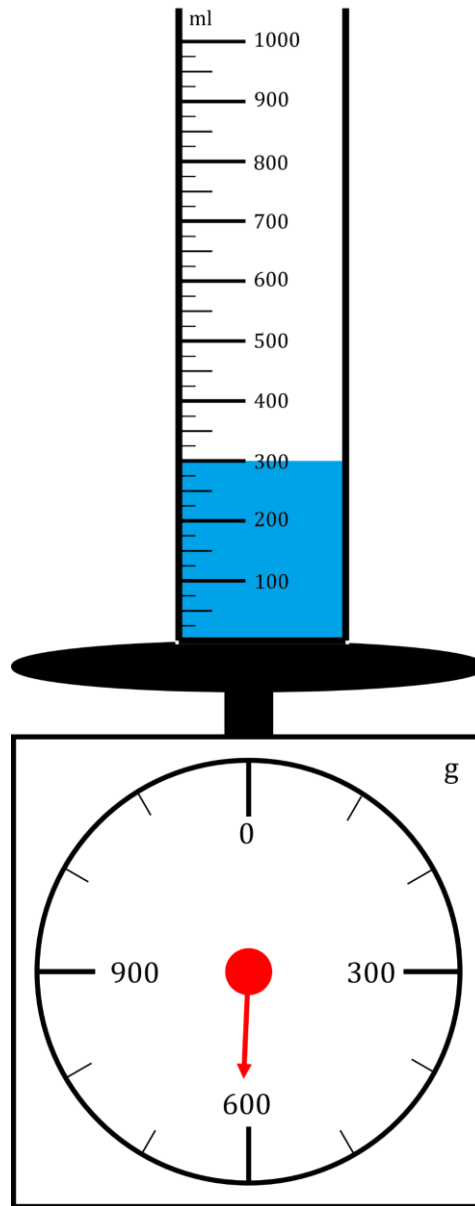
[2 marks]

18(c)   Miriam takes a bite out of the apple on the right, and its weight decreases to 125 g. How much, in grams, of the apple did she bite?

[1 mark]

Turn over ►

Q19 Rosa has a liquid in a measuring cylinder on top of some scales.

19(a) What measurements are displayed on the measuring cylinder and the scales?

[2 marks]

19(b) Using these measurements, how much would 1 ml of the liquid weigh?

[2 marks]

19(c) 300 ml of another liquid is added. The other liquid is half as heavy as the original liquid. How much is in the measuring cylinder now? What do the scales read?

[3 marks]