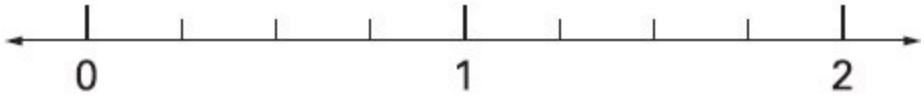
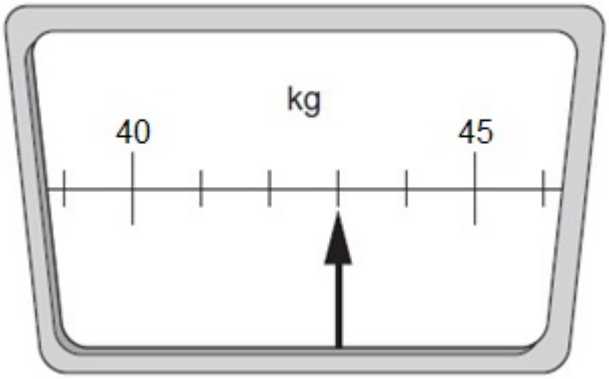
1. Draw an arrow (↓) on the number line to show $1\frac{1}{4}$



1 mark

2. This scale shows how much Charlie weighs.

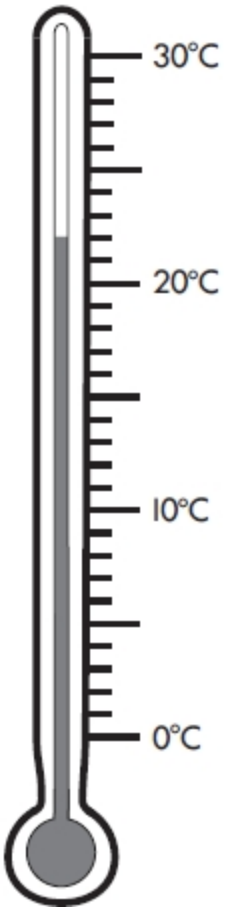


How much does Charlie weigh?

kg

1 mark

3. Look at the thermometer.



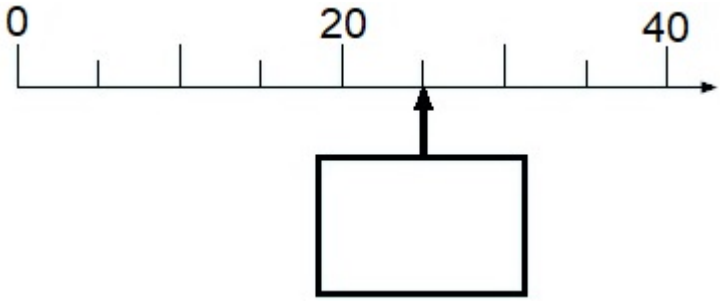
What temperature is shown?

°C

1 mark

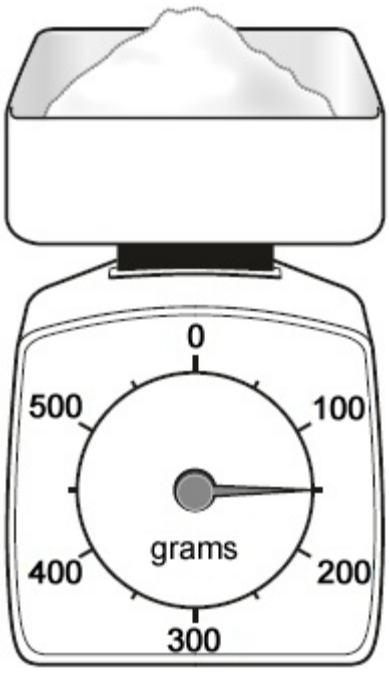
4. Look at the number line.

Write the correct number in the box.



1 mark

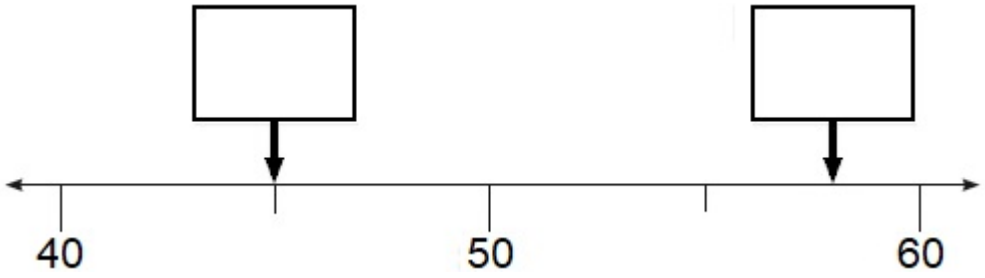
5. How much does the sugar weigh?



g

1 mark

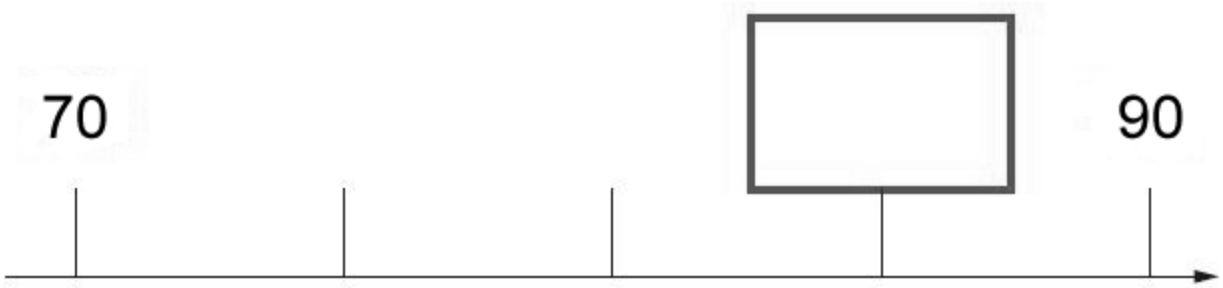
6. Write the correct number in each box.



2 marks

7. Here is part of a number line.

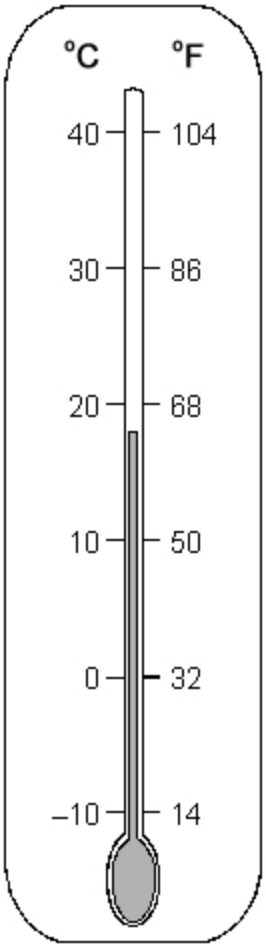
Write the correct number in the box.



1 mark

8. **Temperatures**

The thermometer shows temperatures in °C and °F.



Work out the missing values.

50°C is the same temperature as _____ **°F**

1 mark

–20°C is the same temperature as _____ **°F**

1 mark

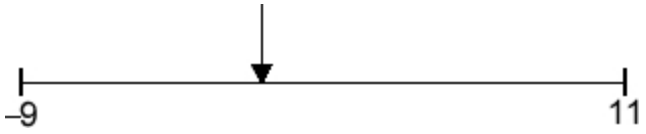
_____ **°C** is the same temperature as **41°F**

1 mark

9. **Number line**

A number line starts at **−9** and finishes at **11**

What number is $\frac{2}{5}$ of the way along the number line?

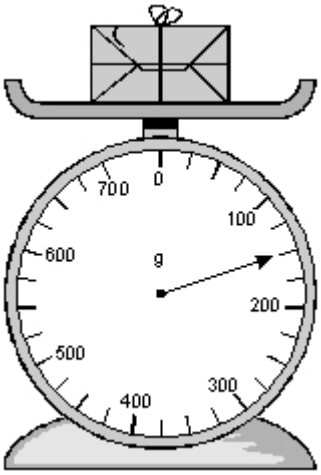


Show your method

2 marks

10. **Weighing**

(a) What is the mass of this parcel?

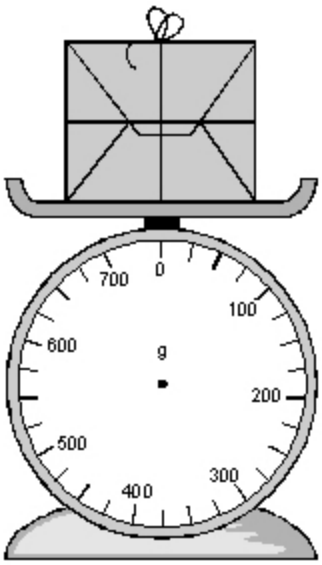


g

1 mark

(b) A different parcel has a mass of **575g**.

Show this on the scale by drawing an arrow.



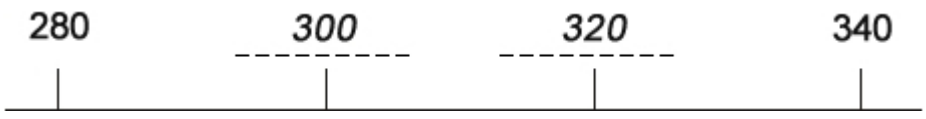
1 mark

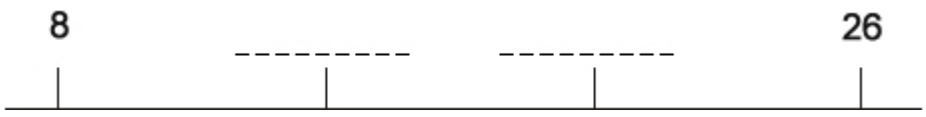
11. **Equal steps**

The numbers on these number lines go up in **equal steps**.

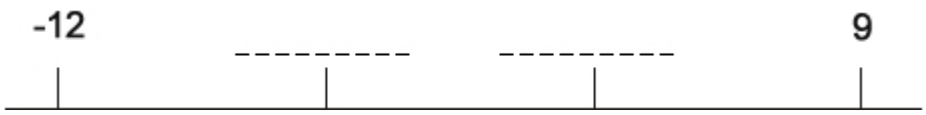
Fill in the missing numbers.

The first number line is done for you.





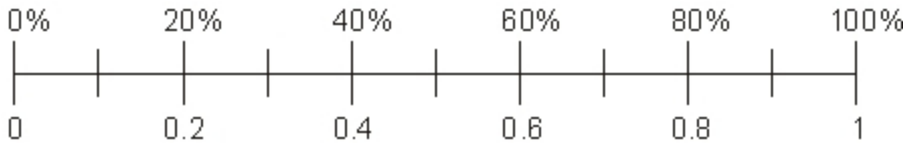
1 mark



1 mark

12. **Double scale**

The scale shows both percentages and decimals.



Fill in the missing **decimals** in the gaps below.

The first one is done for you.

60% is the same as ___*0.6*___

30% is the same as _____

1 mark

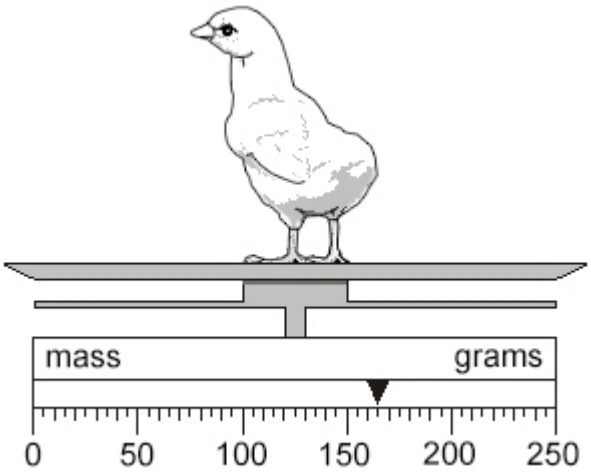
3% is the same as _____

1 mark

13. **Chick**

(a) Look at the scales.

What is the mass of the chick?

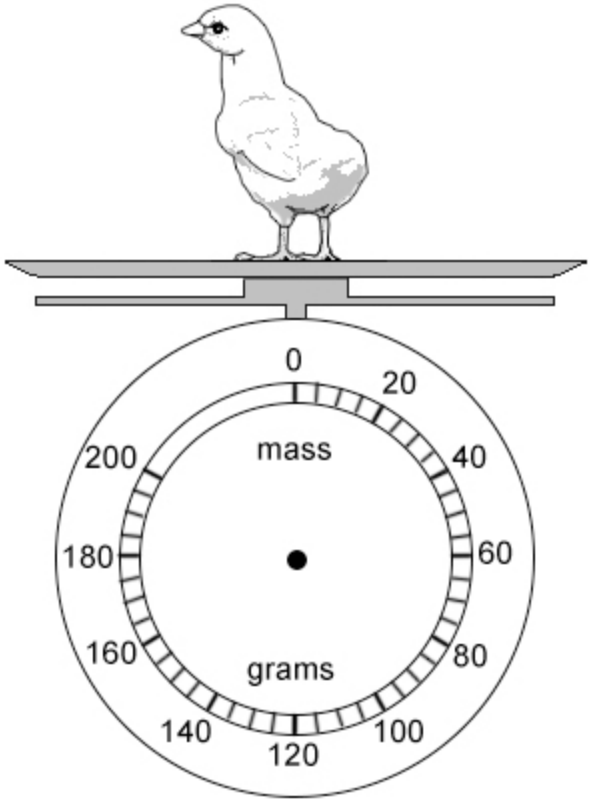


grams

1 mark

(b) The diagram below shows the **same chick** on different scales.

Draw an arrow to show the mass of the chick.

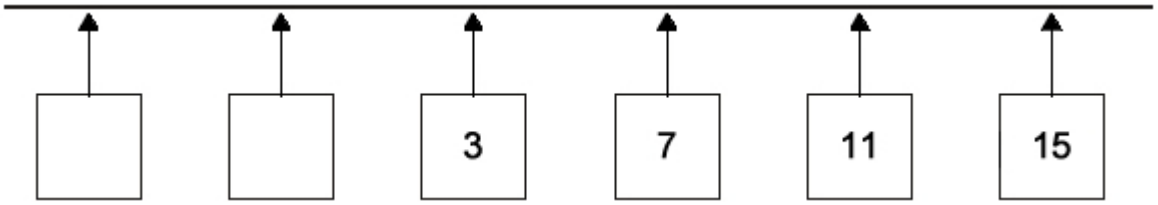


1 mark

14. **Number line**

The number line below goes up in **equal steps**.

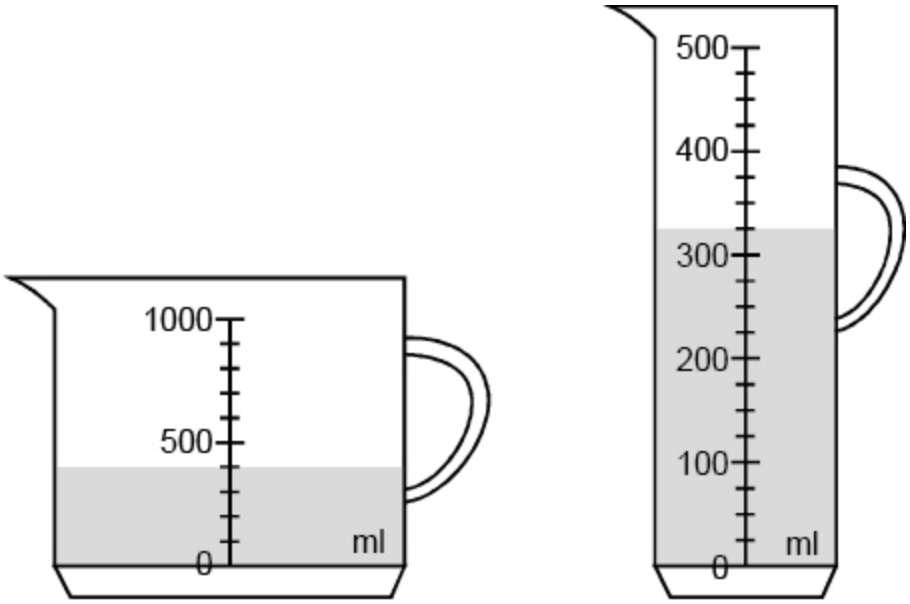
Fill in the missing numbers.



2 marks

15. **Measuring jugs**

The diagram shows the volume of water in two measuring jugs.



Jug **A** Jug **B**

Which jug contains **more** water?

Tick (✓) **A** or **B**.

A ☐ **B** ☐

How much more does it contain?

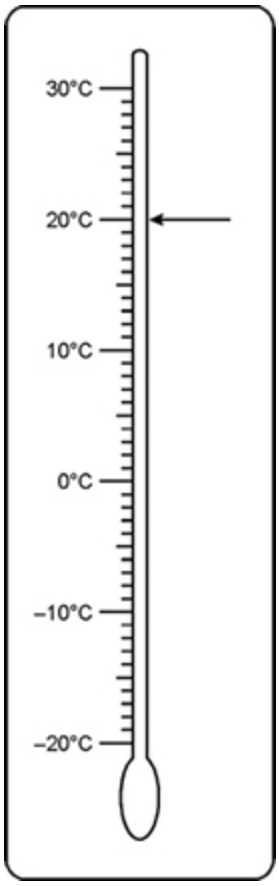
Show your method

ml

2 marks

16. **Temperature**

The arrow by this thermometer shows a temperature of **20°C**



(a) Draw an arrow by the thermometer to show a temperature of **−8°C**

1 mark

(b) The temperature was **−10°C**

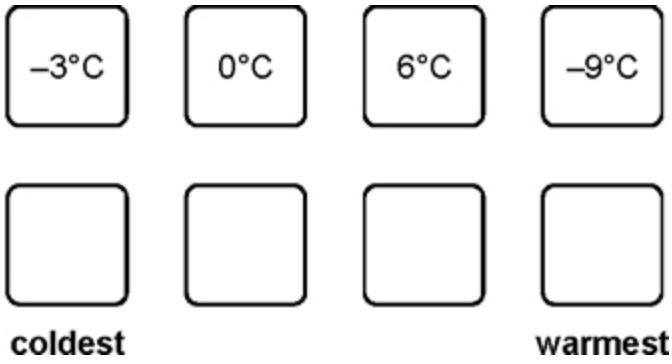
It **went up** by **15°C**

What is the new temperature?

°C

1 mark

(c) Write these temperatures in order, starting with the coldest.

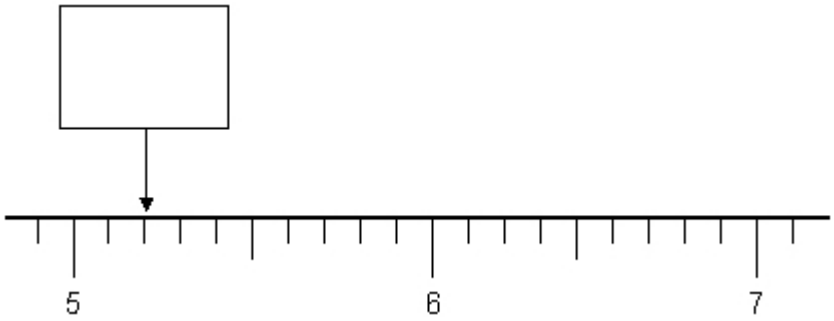


1 mark

17. **Number line**

(a) The diagram shows part of a number line.

What number is the arrow pointing to?



1 mark

(b) Now draw an arrow on the number line above to show the number that is **1.2 less than 7**

1 mark

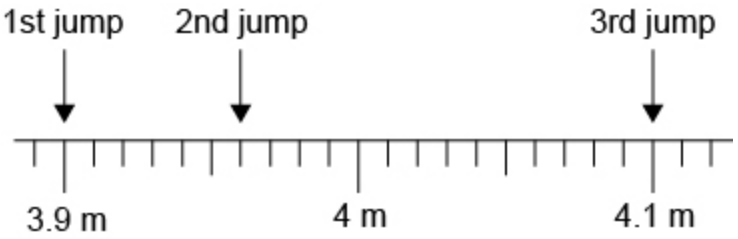
(c) Work out the answer to **6.7 – 0.8**

1 mark

18. **Long jump**

Peter took part in a long jump competition.
He had three jumps.

The arrows on the scale show how far he jumped each time.



(a) How far did Peter jump on his **2nd** jump?

m

1 mark

(b) Peter jumped further on his **3rd** jump than on his **1st** jump.
How much further?

Write your answer in metres.

m

1 mark

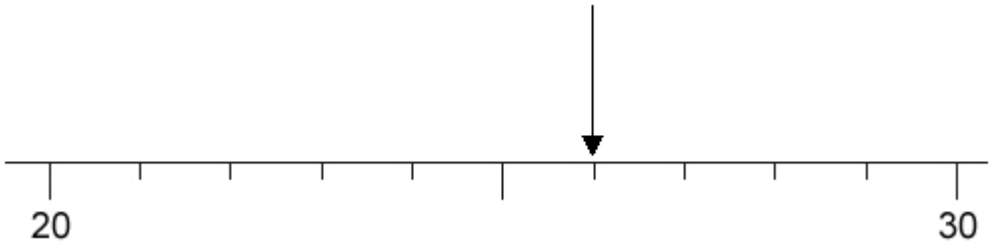
Now write your answer in centimetres.

cm

1 mark

19. **Number lines**

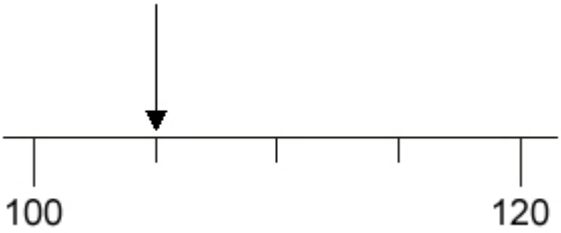
The arrow on the number line shows the value **26**



(a) Draw an arrow (↓) on this number line to show the value **26**

1 mark

(b) Now look at this number line.



What value does the arrow show?

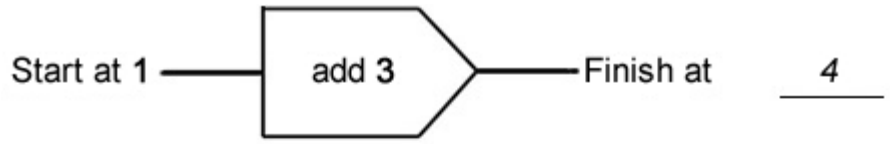
1 mark

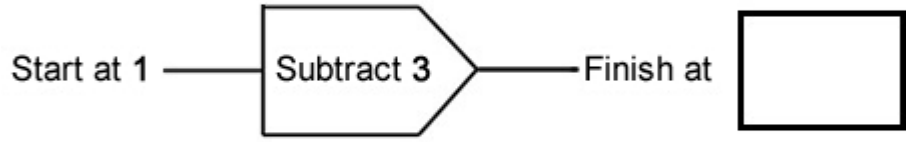
20. **Number line again**

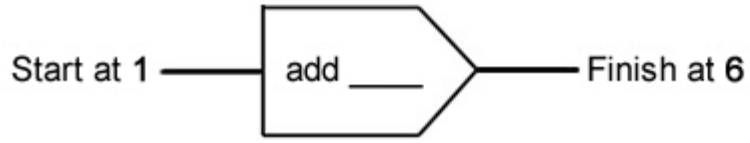
Here is a number line.

The number line can help you work out the missing numbers below.

The first one is done for you.

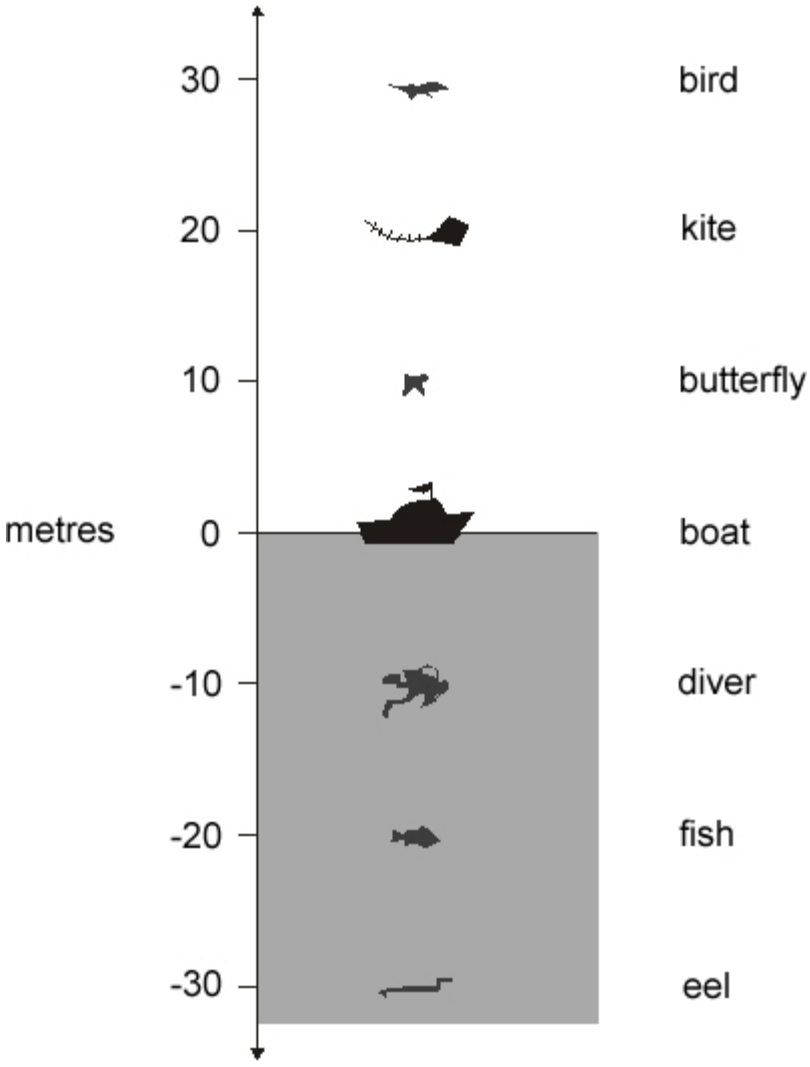






2 marks

21. The diagram shows what is above and below sea level.



(a) What is about **50m lower** than the **bird**?

1 mark

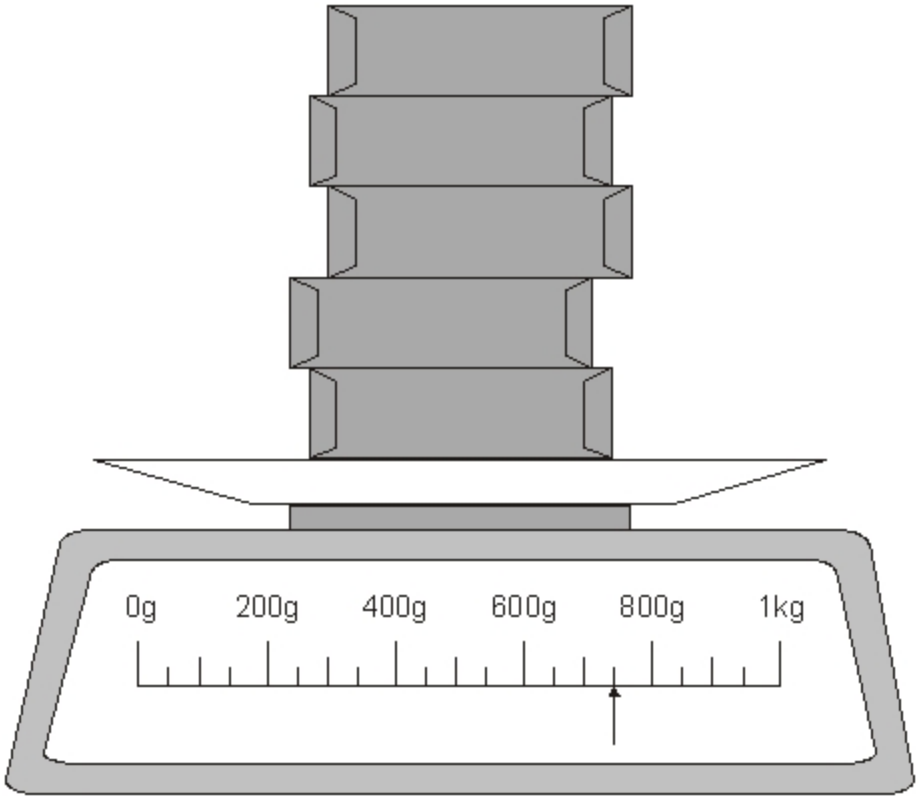
(b) An **octopus** is at about **−40m**.

About **how many metres higher** is the **diver** than the octopus?

m

1 mark

22. Look at the diagram.



The scale shows how much **five** parcels weigh.

All the parcels weigh the **same**.

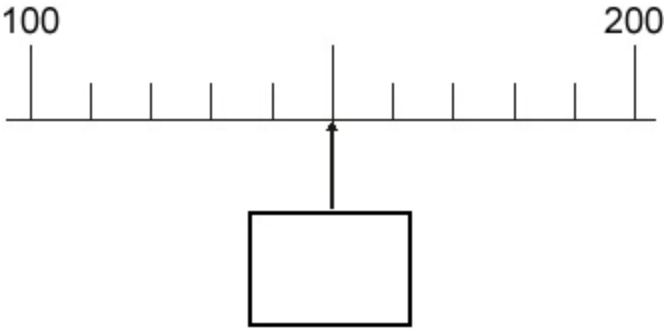
How much does **one** parcel weigh?

Show your method

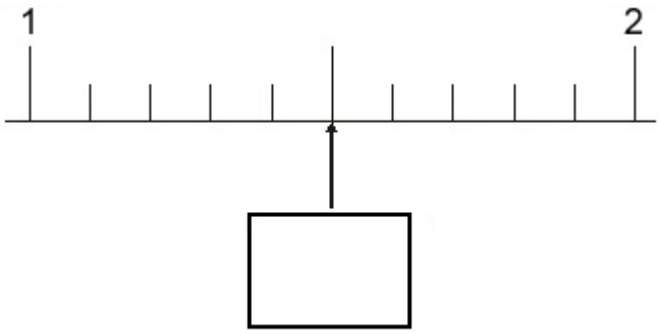
g

2 marks

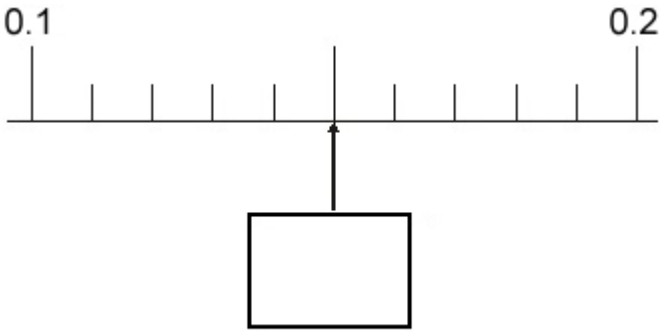
23. What number does the arrow show on each number line below?



1 mark



1 mark

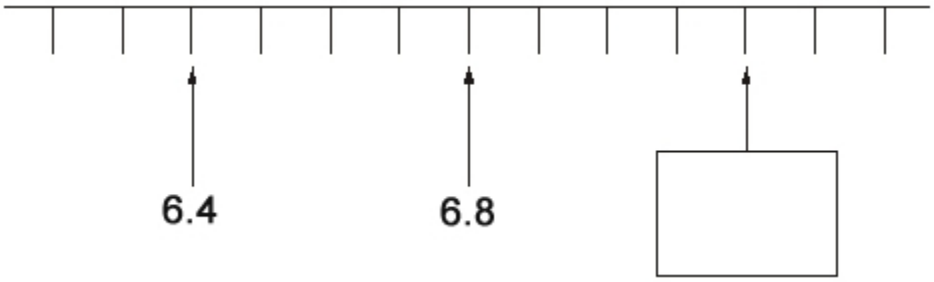


1 mark

24. **Number line**

Look at the number line below.

Write the missing number in the box.



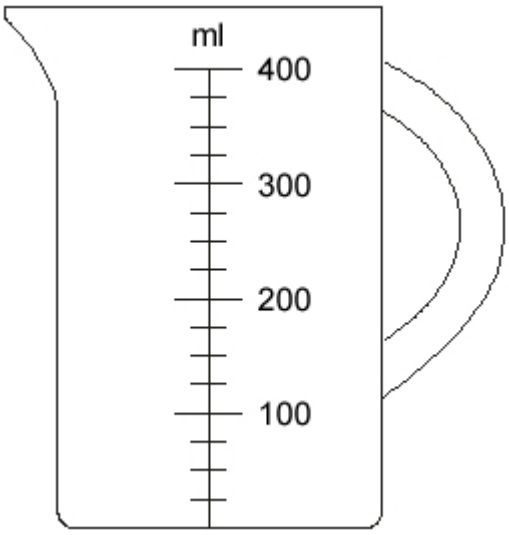
1 mark

25. **Cake mix**

Raj is making a cake.

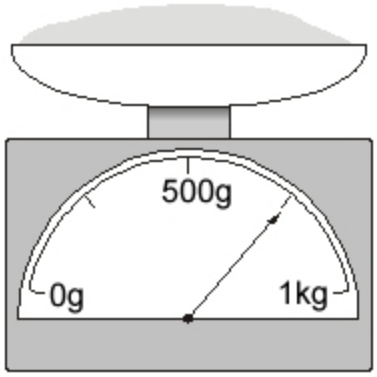
He pours 275ml of milk into a jug.

(a) Draw a line on the jug to show the level of milk.



1 mark

(b) The scales below show how much flour he uses.



How much flour does Raj use?

g

1 mark

(c) Raj put the cake in the oven at 4:00pm.

He took the cake out of the oven after $1\frac{1}{2}$ hours.

At what time did he take the cake out of the oven?

pm

1 mark

26. **Number grid**

Here is part of a number grid.

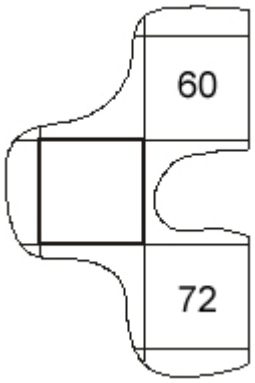
1	2	3	4	5	6
7	8	9	10	11	12
13	14	15	16	17	18
19	20	21	22	23	24

(a) What number is in the square **below** the number **24**?

1 mark

(b) Here is another part of the **same grid**.

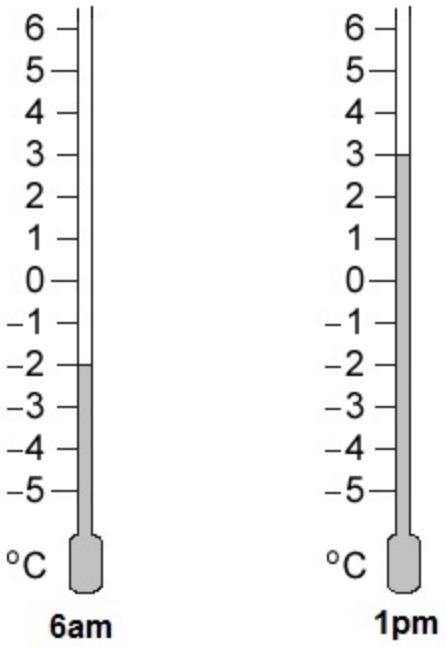
Write in the missing number.



1 mark

27. **Thermometer**

The thermometers show the temperature at different times on one day.



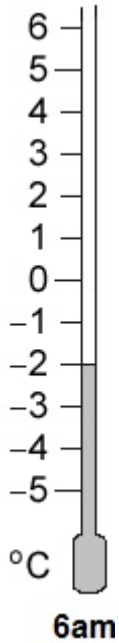
(a) Write the missing number below.

From **6am** to **1pm** the temperature went up by _____ **°C**

1 mark

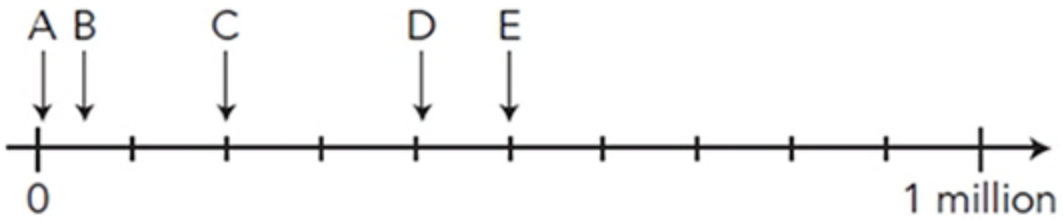
(b) From **1pm** to **6pm** the temperature **went down by 7°C**

Shade the thermometer to show the temperature at 6pm.



1 mark

28. Write the letter of the arrow that points to the number 200,000



1 mark

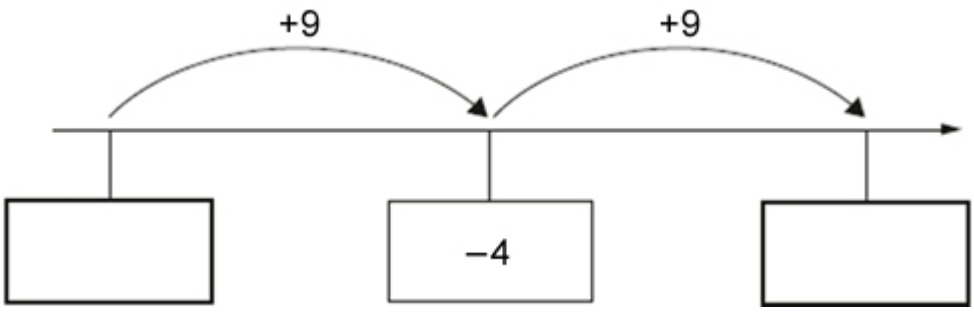
29. Here is part of a number line.

Draw an arrow (↓) to show the position of **0.32**

1 mark

30. Here is part of a number line.

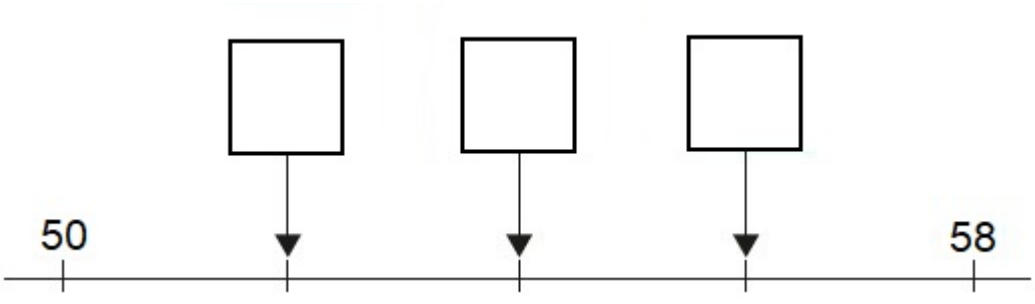
Write the missing numbers in the boxes.



2 marks

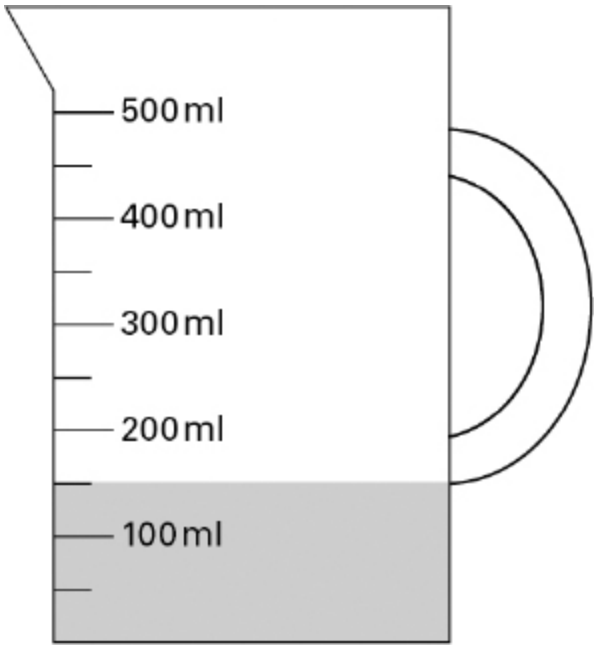
31. The numbers on this number line go up by the **same amount** each time.

Write the missing numbers in the boxes.



1 mark

32. Here is a jug with some water in it.



How many **more** millilitres of water must be added so that there are **500 ml** in the jug?

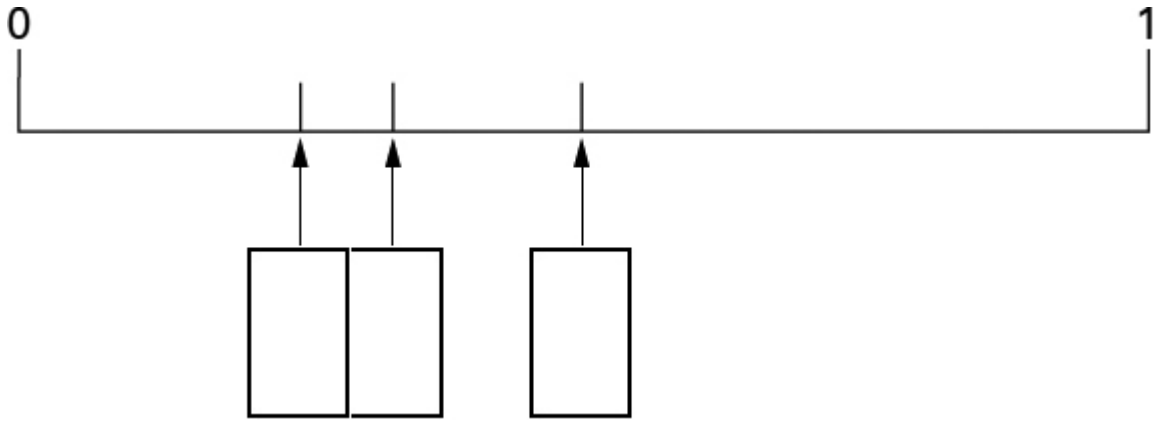
ml

1 mark

33. Here are three fractions.

$\frac{1}{2}$ $\frac{1}{3}$ $\frac{1}{4}$

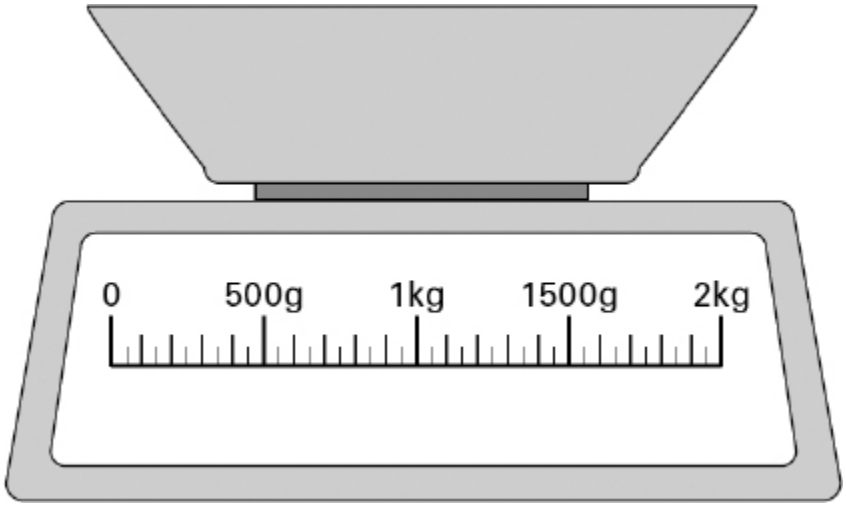
Write the fractions in the correct boxes on the number line.



1 mark

34. Luke needs 200 grams of flour.

Draw an arrow (↑) on the scale to show 200g.

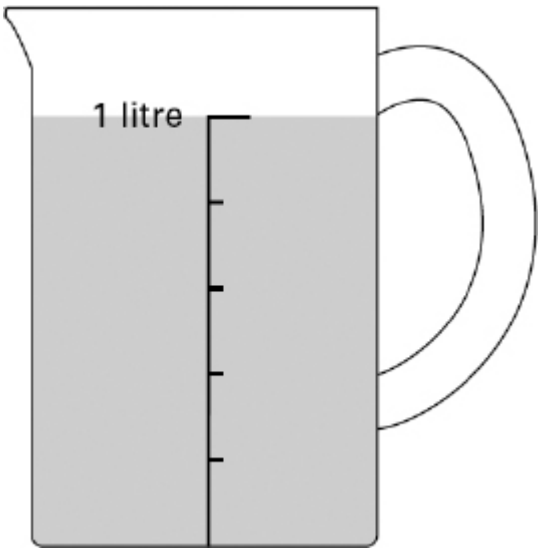


1 mark

35. This jug has 1 litre of water in it.

Lauren **pours out** 400 millilitres of water.

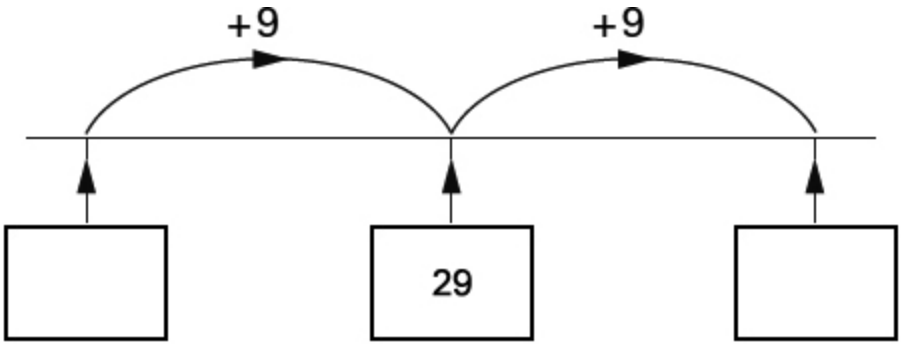
Draw an arrow (⟶) to show the new level of the water in the jug.



1 mark

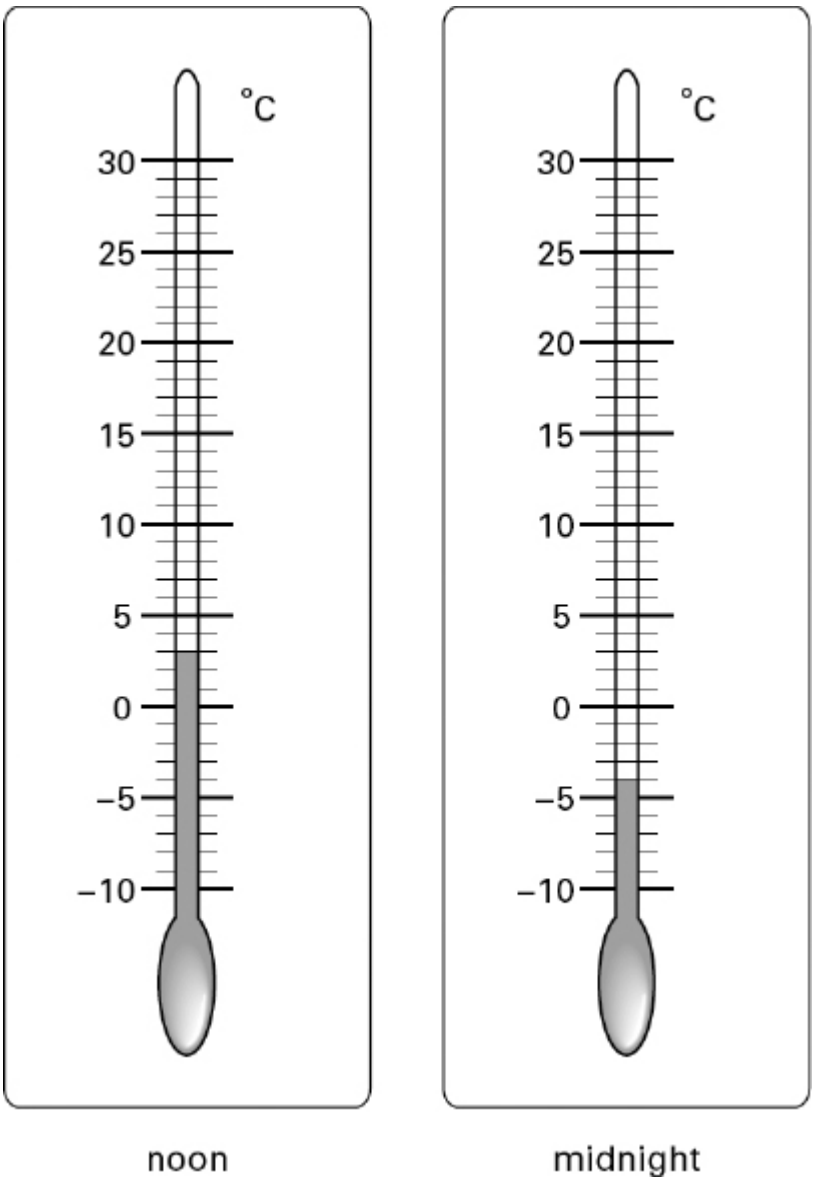
36. Here is part of a number line.

Write in the missing numbers.



1 mark

37. These are temperatures at noon and midnight on a day in winter.

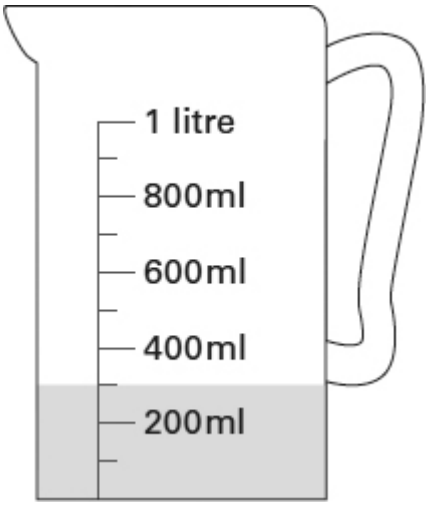


How many degrees higher is the temperature at noon than at midnight?

degrees

1 mark

38. Vijay has a jug with some water in.

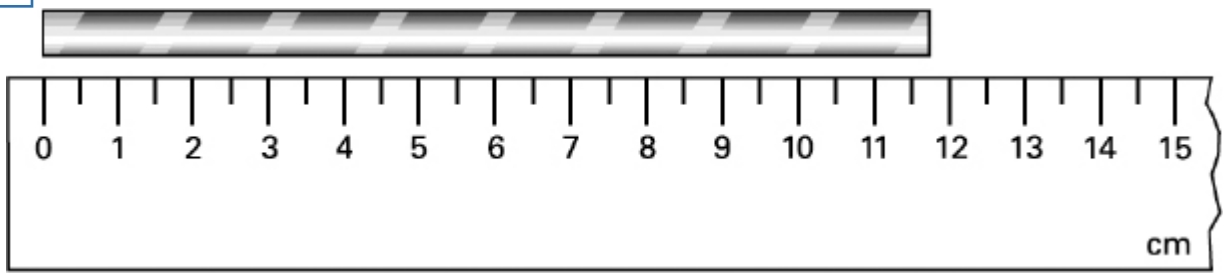


How many **more** millilitres must he add to make 1 litre?

ml

1 mark

39. What is the length of the straw to the **nearest centimetre**?



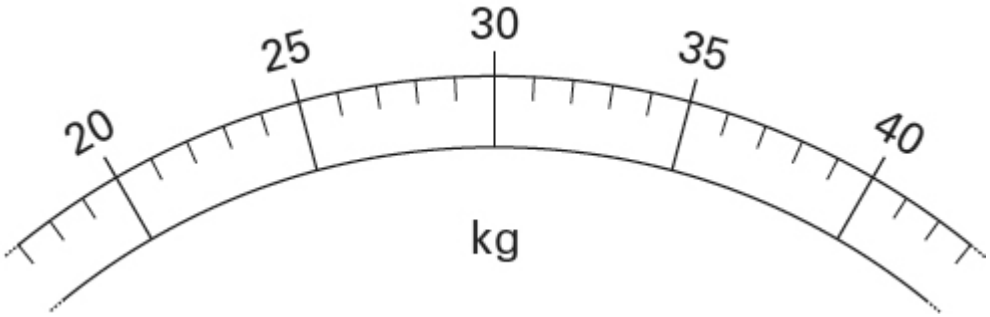
cm

1 mark

40. Vijay weighs 29 kilograms.

Sarah weighs 8 kilograms **more** than Vijay.

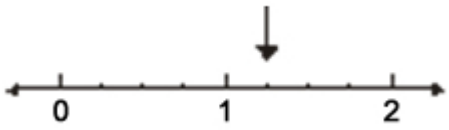
Draw an arrow (↑) on the scale to show how much **Sarah** weighs.



1 mark

Mark schemes

1. An arrow drawn on the number line as shown:



Accept any other clear way of indicating $1\frac{1}{4}$ *on the number line as long as the intention is clear.*
Accept slight inaccuracies, provided the intention is clear.

[1]

2. 43

[1]

3. 22

[1]

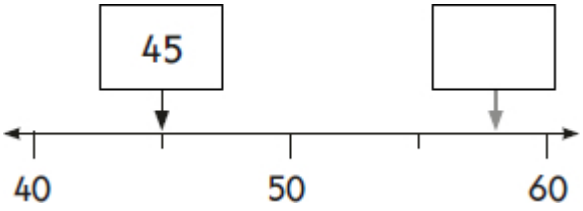
4. 25

[1]

5. 150 (g)

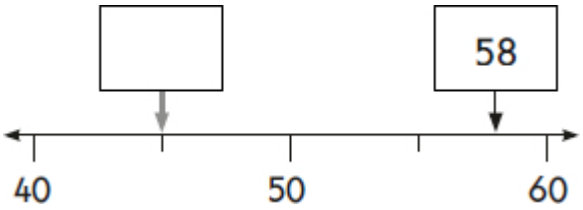
[1]

6. (a) 45 written in the first box as shown:



1

(b) 58 written in the second box as shown:



Accept any number ***in the range 57–59 inclusive****.*

1

[2]

7. Correct number given as shown:

[1]

8. 122

1

− 4
Do not accept temperature as 4 −

1

5

1

[3]

9. – 1

2

or Calculates that the distance from − 9 is 8, eg

- − 9 to 11 is 20, $\frac{2}{5}$ of 20 is 8
- − 9 + 11 = 20, $\frac{2}{5} = \frac{8}{20}$
- 8 given as answer

or

Makes not more than one computational error but continues to find their correct follow through value, eg

- The length of the line is 30 *(error)* $\frac{2}{5}$ of 30 = 12, − 9 + 12 = 3
- $\frac{2}{5}$ of 20 = 6 *(error)*, − 9 + 6 = −3

1

[2]

10. (a) 150

1

(b) Indicates 575

! ***Not exact***
Accept if closer to 575 than to either 550 or 600

1

[2]

11. Completes the number line correctly, ie

U1

Completes the number line correctly, ie

U1

[2]

12. 0.3

Accept equivalent decimals

eg, for the first mark

- *0.30*

1

0.03

! Follow through

Accept follow through as their first mark ÷ 10, provided their first mark was a decimal between 0 and 1 exclusive

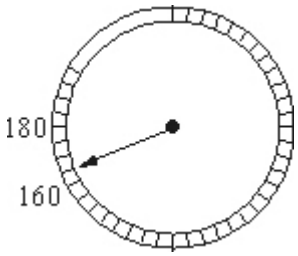
1

[2]

13. (a) 165

1

(b) Indicates 165 on the scale, ie



! Follow through from part (a)

Accept provided their (a) is not a multiple of 10

! Inaccurate indication

Accept provided the pupil's intention is clear

eg, for 165 accept

- *Their indication is closer to 165 than to either 160 or 170*

eg, for follow through from 153 accept

- *Their indication is between 150 and 155*

! Arrow or line too short

Markers can extend to check accuracy

1

[2]

14. Gives both correct values in the correct positions, –5 and –1, ie

2

or Gives the value –1 in the correct position

or

Gives two values, neither of which is greater than zero, with the second value four greater than the first, but which are not the values –7 and –3, eg

- −4 0
- −6 −2

1

[2]

15. Indicates A and gives the answer 75

2

or Shows or implies that jug A contains 400

or

Shows or implies that jug B contains 325

1
U1

[2]

16. (a) Indicates –8 on the thermometer

! Indication not accurate
Accept, provided it is closer to –8 than to –9 or –7

1

(b) 5

1

(c) Orders correctly, ie

–9°C –3°C 0°C 6°C

Accept unambiguous indication, eg
- *4th, 1st, 2nd, 3rd*

! Units omitted or incorrect
Ignore

1

[3]

17. (a) 5.2 or equivalent

! Units shown
Ignore

1

(b) Indicates 5.8 on the number line

! Indication not accurate
Accept if nearer to 5.8 than to 5.7 or 5.9

! Arrow labelled
Ignore, even if incorrect

! Own number line drawn
Accept provided each 0.1 is marked and is equally spaced, and both 5 and 6, or both 6 and 7, are labelled

1

(c) 5.9 or equivalent

Do not accept correct answer shown in working but their final answer given as 59

Do not accept their answer shown as negative, eg
− 5.9

1

[3]

18. (a) 3.96 or equivalent

1

(b) 0.2 or equivalent

1

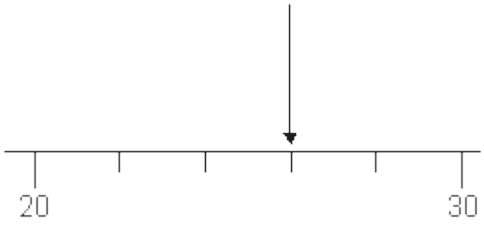
20

1

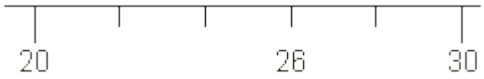
! Follow through
Accept follow through as their first mark in part (b) × 100, provided their first mark is not an integer

[3]

19. (a) Indicates the value 26, ie



! Inaccurate indication
Accept provided the pupil's intention is clear
Accept unambiguous indication, eg



1

(b) 105

1

[2]

20. –2

1

12

1

[2]

21. (a) Fish

Accept unambiguous indication of fish, eg
- *F*
- 

Do not accept –20

1

(b) 30

Do not accept –30

1

[2]

22. 150

2

or Shows the value 750 or 0.75

or

Shows an incorrect reading of the scale but then divides their reading correctly by 5, eg

- 675 seen, then answer of 135

or

Indicates the position of 150 on the scale with incorrect or no further interpretation

! Their reading is not a multiple of 5

Ignore any remainder given, even if incorrect

1

U1

[2]

23. 150

1

1.5

1

0.15

1

Accept equivalent fractions or decimals
For the second and third marks, do not accept follow through
For the second and third marks, do not accept incorrect notation

eg, for the third mark

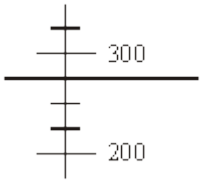
- $0.1\frac{1}{2}$

[3]

24. 7.2 or equivalent

[1]

25. (a) Indicates 275 ml correctly on the scale, ie



Accept inaccuracy provided their indication is closer to 275 than to 250 or 300

Accept any unambiguous indication of the correct point on the scale

1

(b) 750

1

(c) 5: 30

Accept 24 hour clock or pm repeated, eg
- *17: 30*

1

[3]

26. (a) 30

1

(b) 65

U1

[2]

27. (a) 5

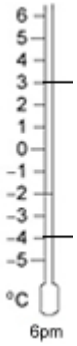
1

(b) Indicates − 4 on the scale

Accept slight inaccuracies in drawing provided intention is clear

Accept shading incorrect or omitted, provided the correct value is clearly indicated on the scale

Where an additional value is also indicated, accept only if this value is 3, eg



1

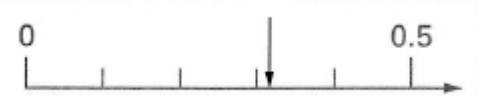
[2]

28. C

Accept unambiguous indication

[1]

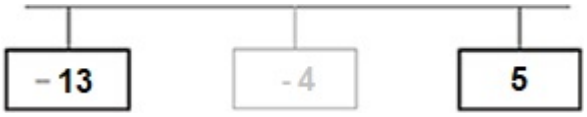
29. Arrow drawn in the range 62mm to 66mm inclusive, measured from zero mark.



The arrow need not touch the line, provided the intention is clear.
Accept any other clear way of indicating the correct point, such as a cross.

[1]

30. Award **TWO** marks for both numbers correct as shown.



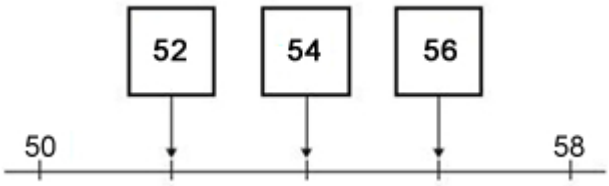
If the answer is incorrect, award **ONE** mark for one number correct.

***Do not** accept 13−*
Accept +5 in the right-hand box.

Up to 2

[2]

31. All three numbers correct, as shown:



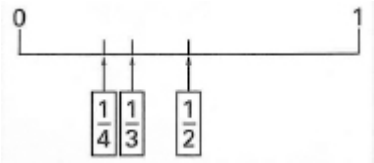
If the answer boxes are empty, accept the correct values written in the correct order elsewhere on the page.

[1]

32. 350

[1]

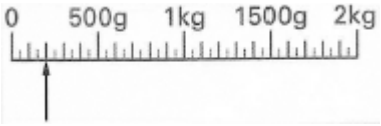
33. Boxes completed as shown:



***All three** boxes must be correct for the award of the mark.*

[1]

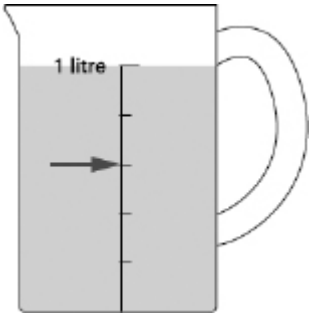
34. Arrow drawn to 200g as shown:



Arrow should be closer to 200g than 150g or 250g for the award of the mark.
Accept any other clear way of indicating the correct point, such as a cross.

[1]

35. Arrow drawn to 600ml as shown:



The arrow need not touch the line, provided the intention is clear.

Accept any other clear way of indicating the correct point, such as a cross.

[1]

36. 20 29 38

***Both** numbers must be correct for the award of the mark.*

[1]

37. 7

*Accept 7° **OR** 7°C*

Allow −7

[1]

38. 700

[1]

39. 12

[1]

40. Arrow drawn to 37 as shown:

Arrow should be closer to 37 than 36 or 38 for award of the mark.
Arrow need not touch the line, provided the intention is clear.

[1]