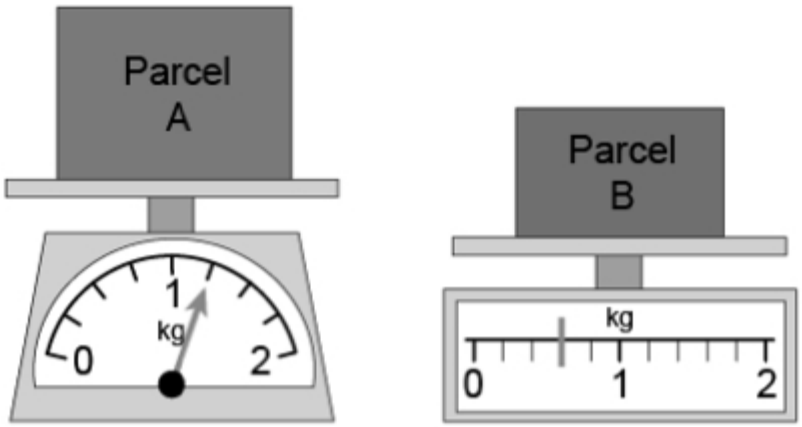
1. Here are two parcels:



What is the total combined weight of the parcels, in kilograms?

kg

1 mark

2. Maria makes **1,531g** of cake mix.

She puts **250g** into a small cake tin.

She shares the rest equally between **3** large cake tins.

How many grams of cake mix should she put in each large cake tin?

Show your method

g

2 marks

3. A chef needs **2.4kg** of potatoes for a recipe.

One potato weighs about **0.3kg**.

Approximately how many potatoes does the chef need?

1 mark

4. I need **0.5kg** of brown flour and **0.7kg** of white flour for a recipe.

What is the total mass of flour that I need?

kg

1 mark

5. An apple weighs about **0.1kg**.

Approximately how many apples are there in a **1.8kg** bag?

1 mark

6. The school has **17** packs of butter.

Each pack weighs $\frac{1}{4}$ **kg**.

How many kilograms of butter do they have altogether?

Express your answer as a **mixed number**.

kg

1 mark

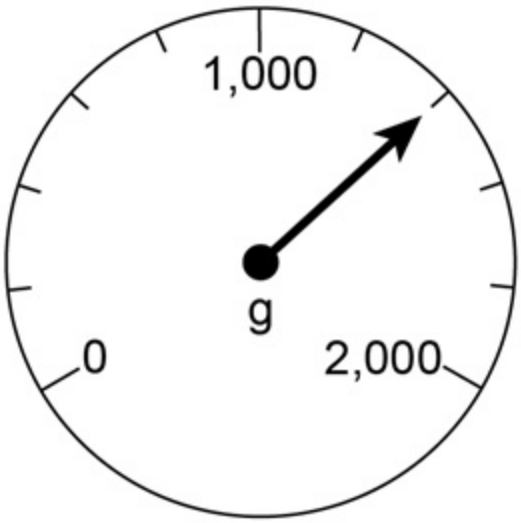
7. **45kg** of animal feed is shared between some horses.

They each get **5kg**.

How many horses were there?

1 mark

8.



What is the reading on the scale?

g

1 mark

9. Estimate and mark the position of **600g** on this scale.

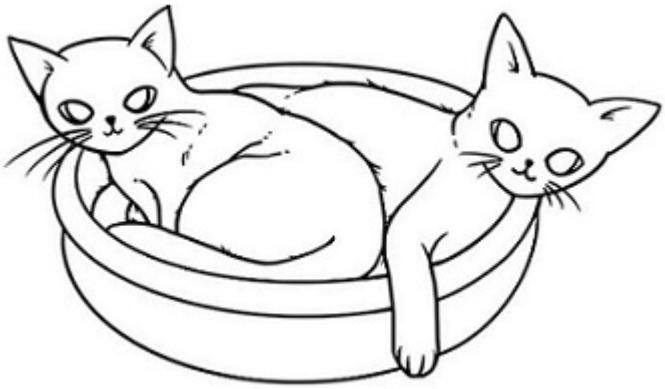
1 mark

10. Mr. Davis has 2 cats.

One cat weighs **4,200g**.

The other cat weighs **3,050g**.

Their basket weighs **2kg**.



How much does the basket weigh with both cats inside it?

1 mark

11. A rhino mother weighs about **1,000kg**.

She weighs about **10 times as much** as her baby.

What is the **approximate** weight of the baby rhino?

kg

1 mark

12. Marek is 2 years old and has a mass of **10kg**.

His father's mass is **10 times as much**.

What is the mass of Marek's father?

kg

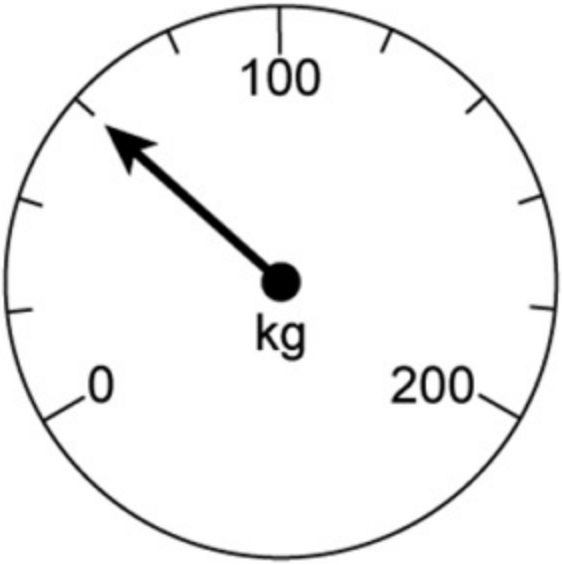
1 mark

13. A bag holds **2,500g** of rice.

How many **100g** servings of rice are there in a bag?

1 mark

14. Miss Scot weighs herself.

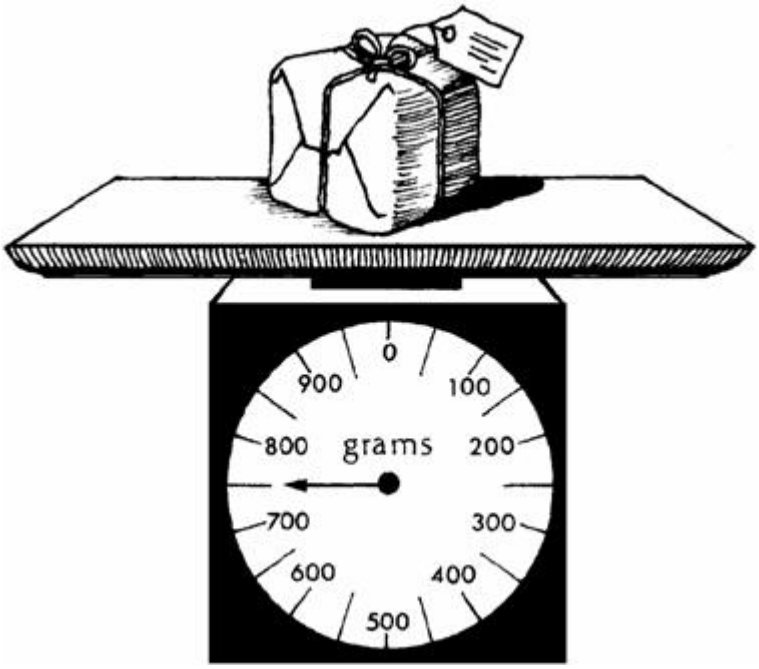


How much does she weigh, in kilograms?

kg

1 mark

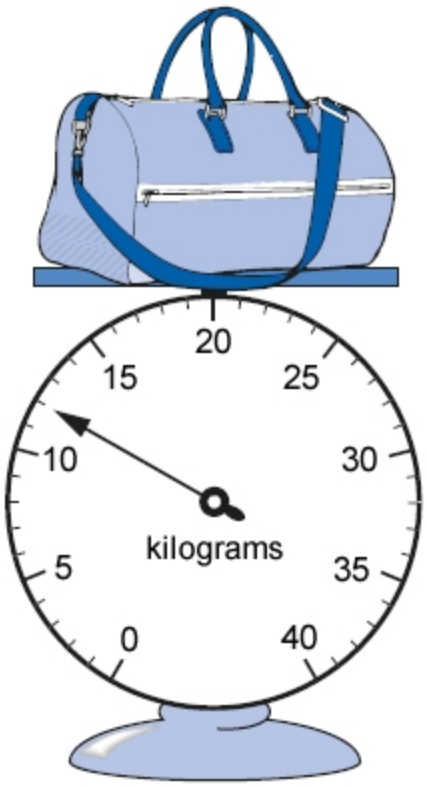
15. How heavy is the parcel?



g

1 mark

16. How much does the bag weigh?

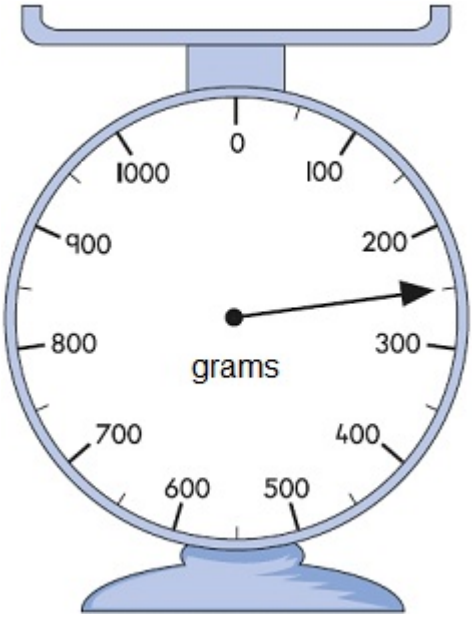


kilograms

1 mark

17. Ravi has a kitten.

The scale shows the weight of the kitten.



How much does the kitten weigh?

grams

1 mark

18. Abdul goes to the zoo.

He finds out the mass of some animals.

Cheetah
58 kg

Tiger
94 kg

Lion
94 kg

Compare the mass of the animals.

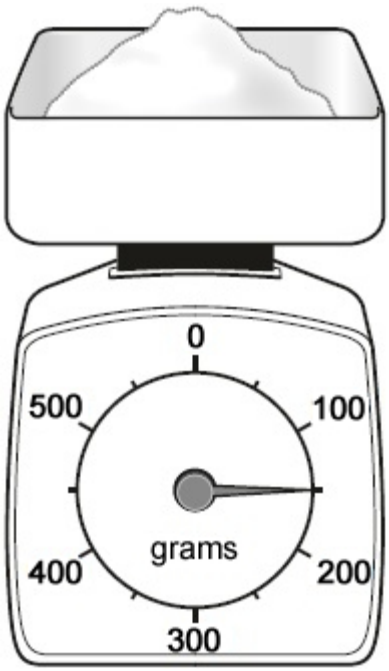
Write **<** or **>** or **=** in each box.

Cheetah's mass ☐ Tiger's mass

Tiger's mass ☐ Lion's mass

1 mark

19. How much does the sugar weigh?

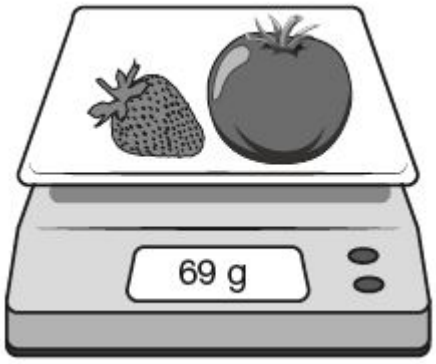


g

1 mark

20. The strawberry weighs **24** grams.

The strawberry and tomato together weigh **69** grams.



What does the tomato weigh?

g

1 mark

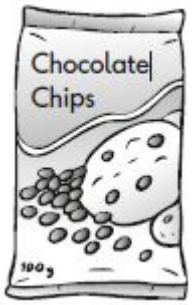
21.

There are **100g** of chocolate chips in the bag.

Sita uses **25g**.

Ben uses **35g**.

How many grams of chocolate chips are **left** in the bag?



Show your method

g

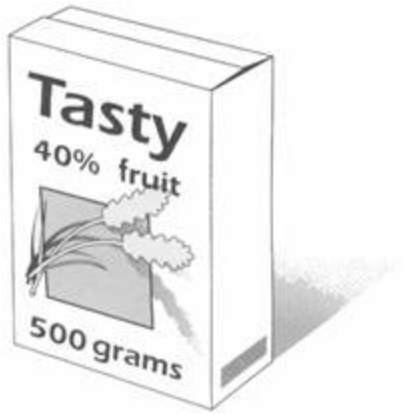
2 marks

22. **Tasty**

A packet of Tasty contains fruit and cereal.

Altogether, the mass of fruit and cereal is **500 g.**

40% of it is **fruit. 60%** is **cereal.**



(a) How many grams of **fruit** does this packet of Tasty contain?

grams

1 mark

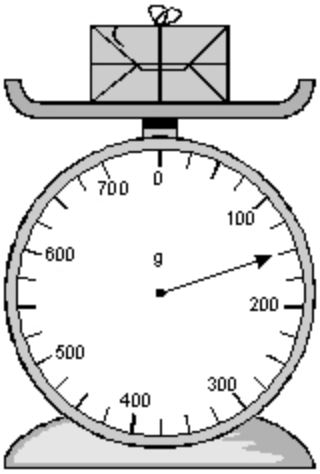
(b) How many **60 gram** servings can you get from one packet of Tasty?

servings

1 mark

23. **Weighing**

(a) What is the mass of this parcel?

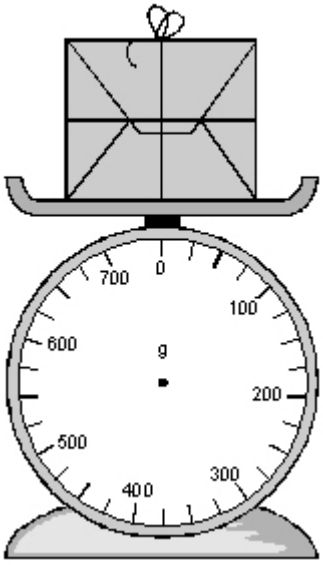


g

1 mark

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

Show this on the scale by drawing an arrow.



1 mark

24. **Doughnut**

Here are the ingredients to make 12 doughnuts.

200 g flour
40 g margarine
60 ml milk
50 g sugar
1 egg
Makes **12 doughnuts**

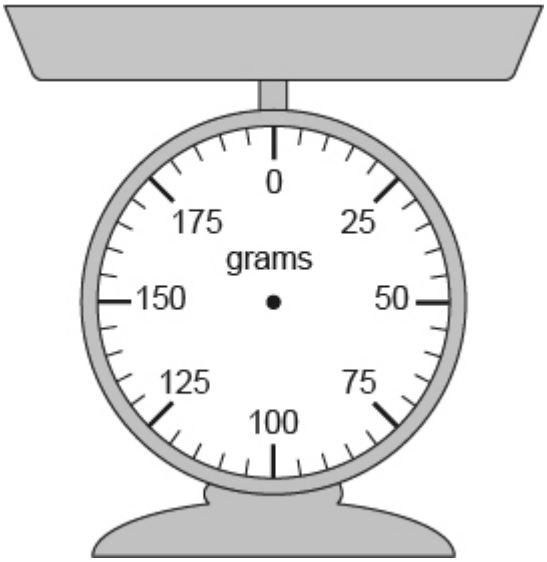
Jake wants to make **18** doughnuts.

(a) How much **margarine** does he need?

g

1 mark

(b) Draw an arrow on the scale below to show how much margarine he needs.

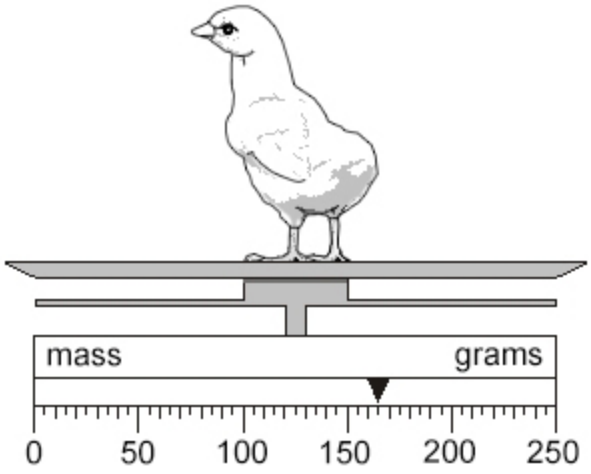


1 mark

25. **Chick**

(a) Look at the scales.

What is the mass of the chick?

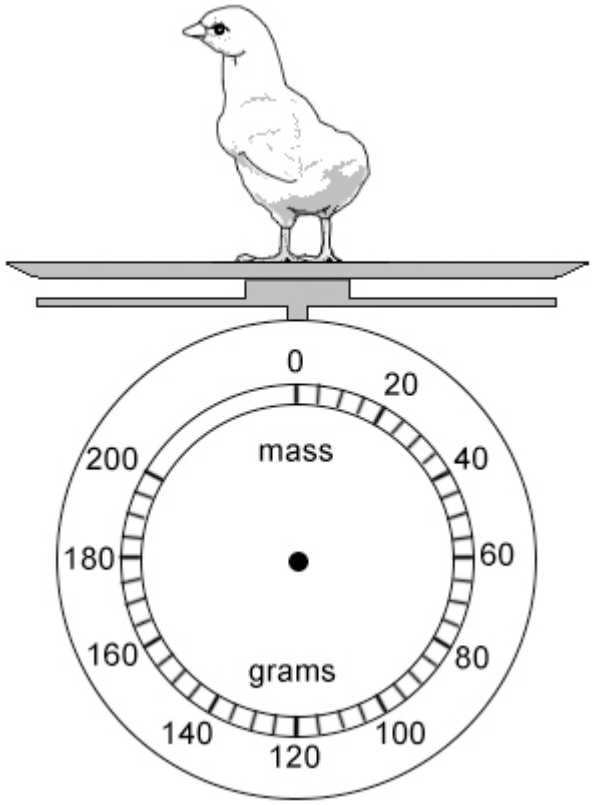


grams

1 mark

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

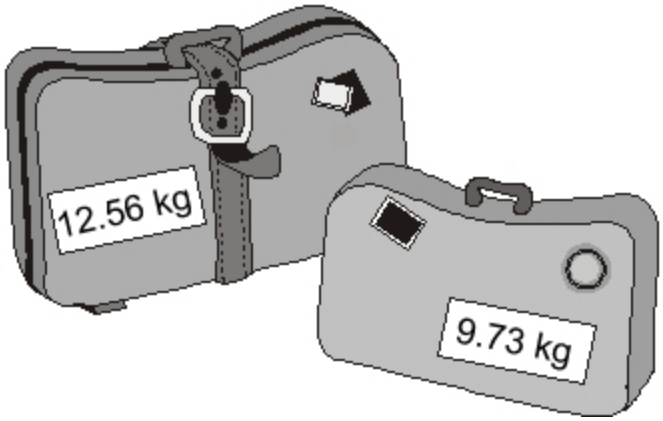
Draw an arrow to show the mass of the chick.



1 mark

26. **Suitcases**

Amar packs two suitcases to take on a plane.



One suitcase weighs **12.56kg**.
The other weighs **9.73kg**.

Amar is only allowed to take **20kg** on the plane.

His suitcases are too heavy.

By how much are they too heavy?

Show your method

kg

2 marks

27. **Baby**

(a) About how much does a **new-born baby** weigh?

Tick (✓) the correct answer.

- ☐ 0.3 kg
- ☐ 3 kg
- ☐ 30 kg
- ☐ 300 kg

1 mark

(b) About how much milk does a **baby's bottle** hold?

Tick (✓) the correct answer.

- ☐ 3 millilitres
- ☐ 300 millilitres
- ☐ 3 litres
- ☐ 300 litres

1 mark

28. **Estimates**

Which value completes each sentence? Tick (✓) the correct box.

The first one is done for you.

The **length** of a **banana** is about …

- [ ] 2 cm
- [✓] 20 cm
- [ ] 200 cm
- [ ] 2000 cm

A **can of drink** holds about …

- [ ] 0.3 litres
- [ ] 3 litres
- [ ] 30 litres
- [ ] 300 litres

1 mark

The **weight** of an **apple** is about …

- [ ] 1 gram
- [ ] 10 grams
- [ ] 100 grams
- [ ] 1000 grams

1 mark

29. (a) Tick (✓) the correct box to show about **how long a car** is.

☐ 4 millimetres	☐ 4 centimetres
☐ 4 metres	☐ 4 kilometres

1 mark

(b) Tick (✓) the correct box to show the **temperature in a freezer**.

☐ 180°C	☐ −18°C
☐ 18°C	☐ 1.8°C

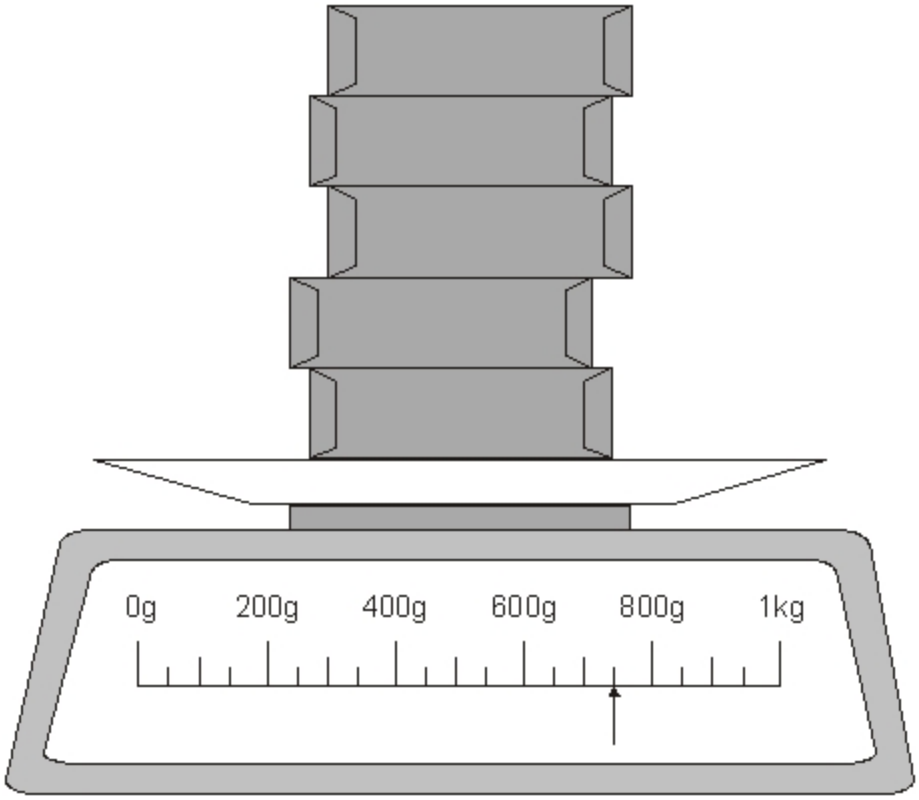
1 mark

(c) Tick (✓) the correct box to show about how much **a cat weighs**.

☐ 3 grams	☐ 30 kilograms
☐ 30 grams	☐ 3 kilograms

1 mark

30. Look at the diagram.



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

All the parcels weigh the **same**.

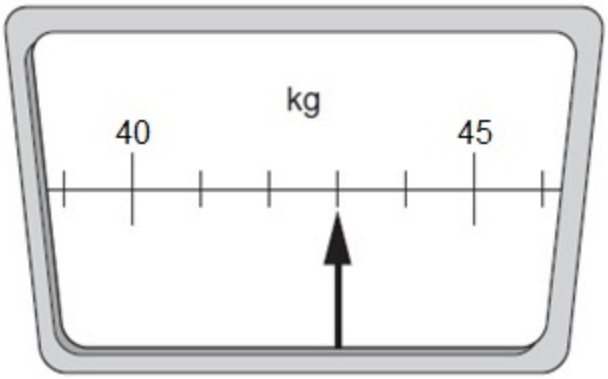
How much does **one** parcel weigh?

Show your method

g

2 marks

31. This scale shows how much Charlie weighs.



How much does Charlie weigh?

kg

1 mark

32. Emma uses 5 shapes to balance a 50 g weight on a scale.

Each ☐ weighs 12 g.

How much does each ● weigh?

Show your method

g

2 marks

33. Luke buys **750** grams of apples.

Each apple weighs between **140** grams and **160** grams.

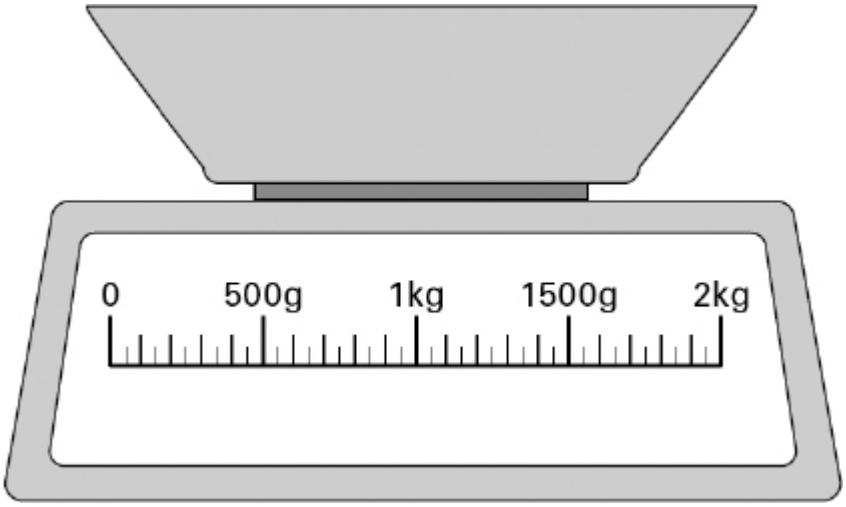
Circle the number of apples that Luke buys.

4 5 6 7 8

1 mark

34. Luke needs 200 grams of flour.

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

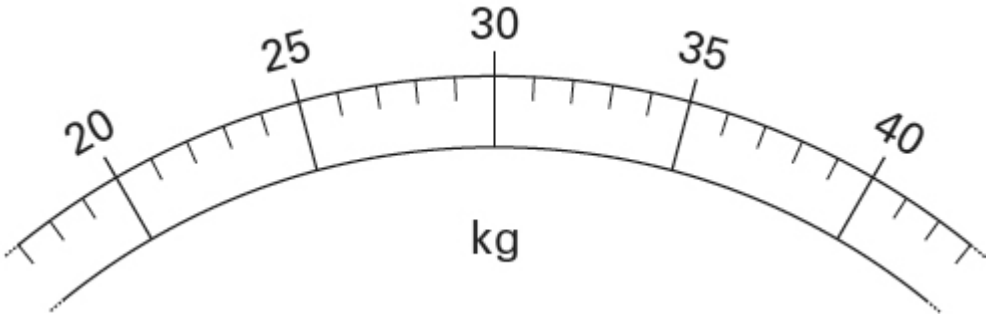


1 mark

35. Vijay weighs 29 kilograms.

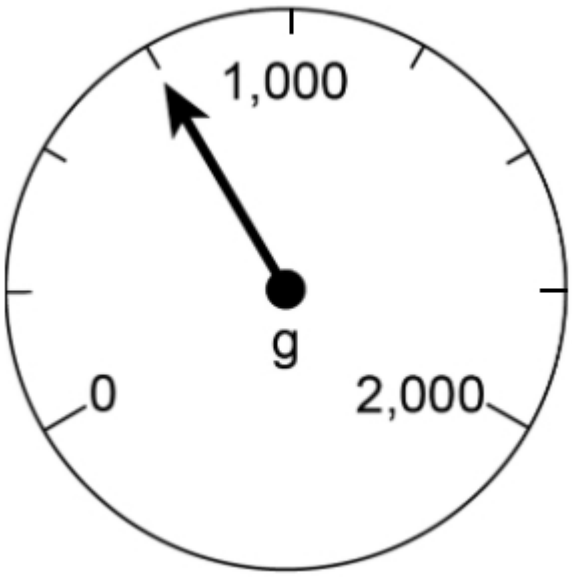
Sarah weighs 8 kilograms **more** than Vijay.

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



1 mark

36.



What is the reading on the scale?

g

1 mark

Mark schemes

1. 1.25 + 0.6 = 1.85 kg

[1]

2. Award **TWO** marks for the correct answer of 427 g.

If the answer is incorrect, award **ONE** mark for evidence of an appropriate method, e.g.

- 1531 − 250 = 1281g
- 1281 ÷ 3 = *wrong answer*

OR

- Attempt to subtract 250 from 1,531.

OR

- 1,281 seen

OR

- Attempt to divide their answer (1,281) by 5

Up to 2m

[2]

3. 8

[1]

4. 1.2 kg

[1]

5. 18

[1]

6. 4 ¼ kg

[1]

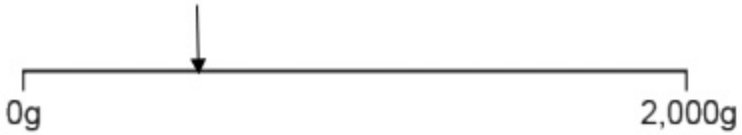
7. 9

[1]

8. 1,400 g

[1]

9. Arrow or line drawn to a point in the range of 550g to 650g inclusive. Do we need to offer a "range" or acceptable answers? The lowest possible answer with one arrow and the highest possible with another?



***Do not** accept arrow drawn too far outside either of these ranges.*

[1]

10. 9,250 g or 9.25 kg

[1]

11. 100 kg

[1]

12. 100 kg

[1]

13. 25

[1]

14. 60 kg

[1]

15. 750 (grams)

Accept 'seven hundred and fifty (grams)' in words.
Also accept answers between 745 g and 755 g.

[1]

16. 12 (kilograms)

[1]

17. 250 (grams)

[1]

18. Both signs written correctly as shown:

Cheetah's mass [<] Tiger's mass

Tiger's mass [=] Lion's mass

Accept any unambiguous drawing of the correct symbol.
***Do not** accept words instead of signs, e.g.*
do not accept 'less than' in place of the '<' sign.

[1]

19. 150 (g)

[1]

20. 45 (g)

[1]

21. Award **TWO** marks for the correct answer of 40 (g).

If the answer is incorrect or missing, award **ONE** mark for evidence of a complete, correct method, e.g.

- 100 − 25 − 35 = (incorrect or no answer)
- 25 + 35 = 70 (error)
  100 − 70 =

OR

Any of these partial methods correctly evaluated, i.e.

- 100 − 25 = 75
- 100 − 35 = 65
- 25 + 35 = 60

OR

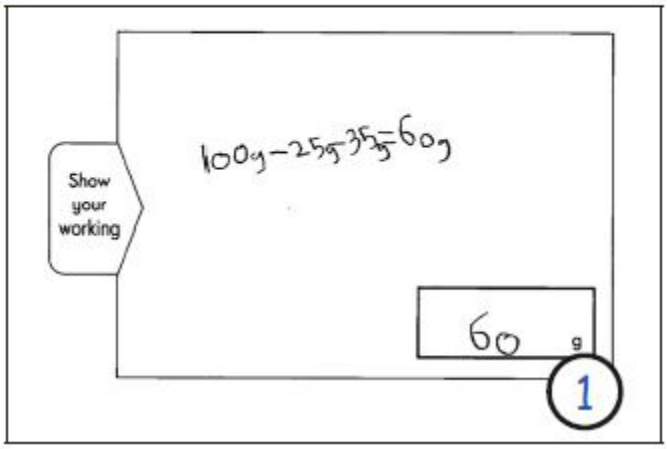
- Sight of 75, 65 or 60

(Use the example responses to help you determine how many marks can be awarded.)

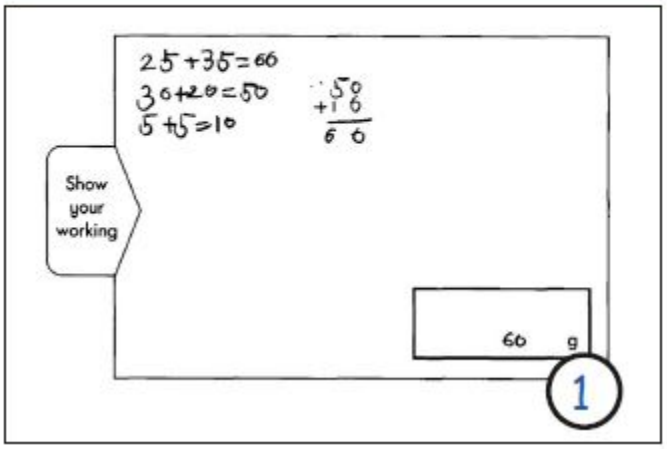
[2]

Example responses

Sasha: 1 mark

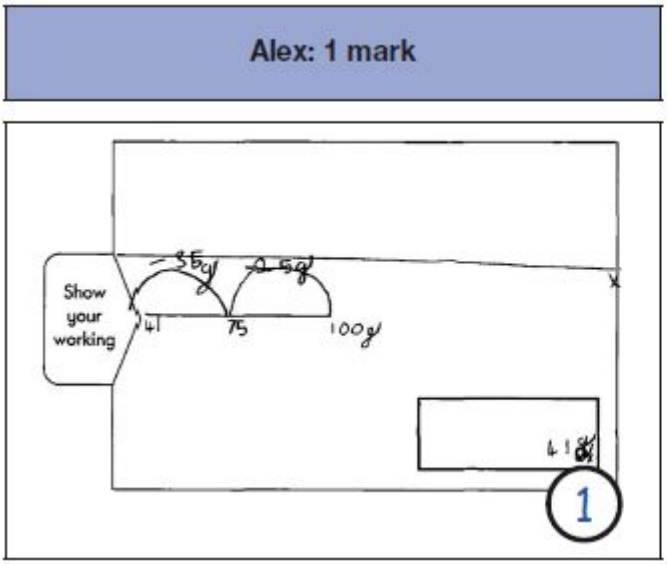


Hassan: 1 mark

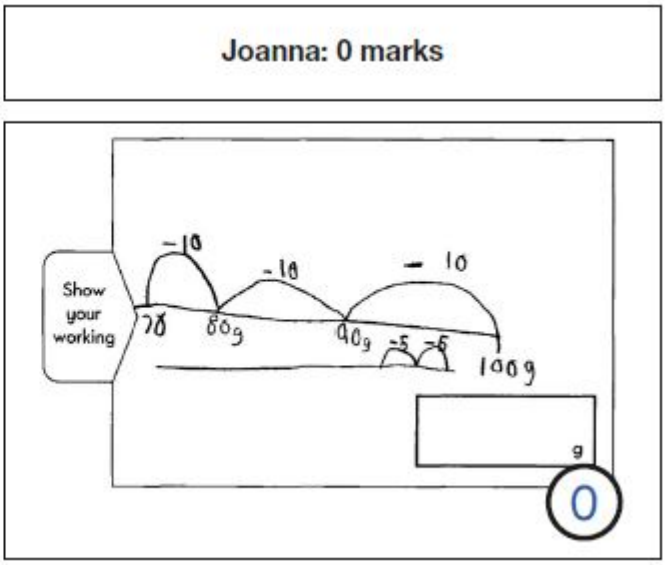


Sasha and Hassan have recorded the same incorrect answer in the answer box.
In her working, Sasha has shown a complete, correct method with an arithmetic error. Although her final answer is incorrect, she is awarded **one mark** for the complete, correct method.
Hassan, in comparison, has only provided a partial method. He has correctly added Sita's and Ben's chocolate chips, but has not subtracted that total from 100. Although his method is not complete, he is awarded **one mark** for a partial method correctly evaluated.

Alex: 1 mark

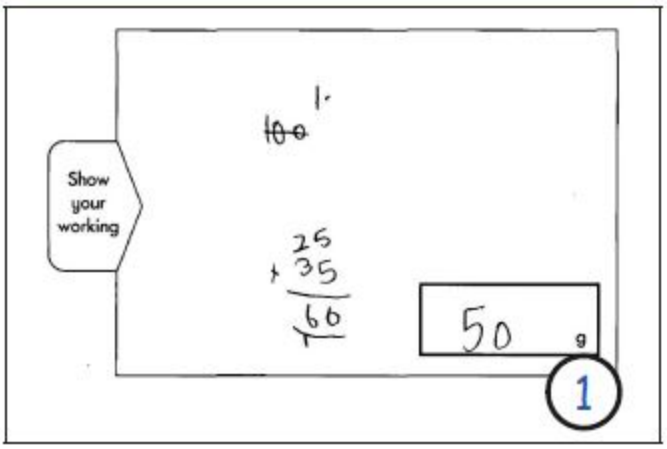


Joanna: 0 marks

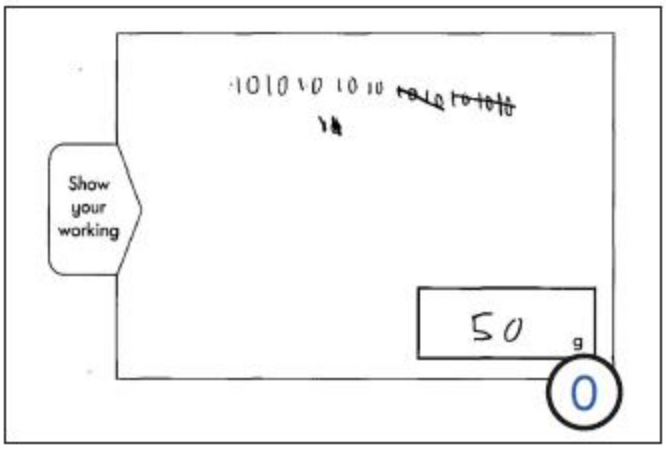


Alex and Joanna have both used a number line as part of their method.
In his method, Alex first subtracts 25g from 100g to get 75g. He then attempts to subtract 35g from 75g and makes an arithmetic error. Although he has given an incorrect final answer, he can be awarded **one mark** for a complete, correct method.
In contrast, Joanna's method cannot be considered complete or correct as there is no indication that she is subtracting either Ben's or Sita's chocolate chips, so **no marks** are awarded.

Katie: 1 mark

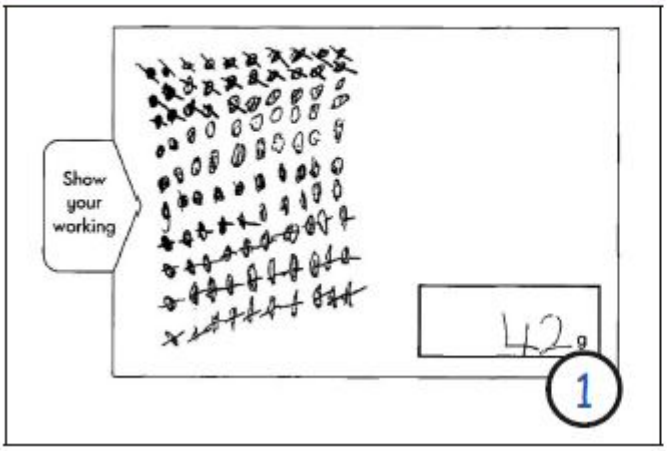


Luke: 0 marks

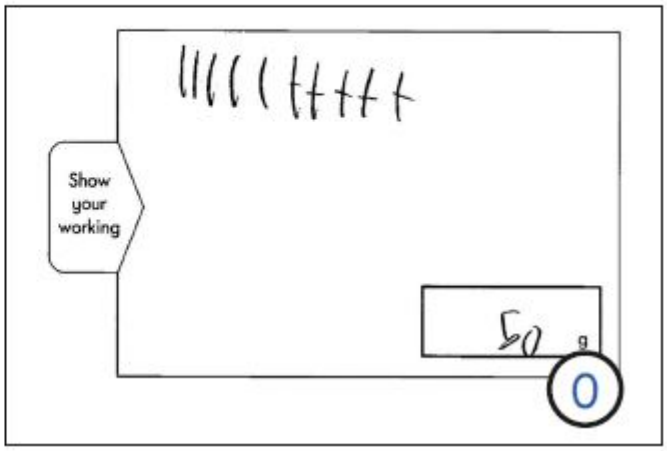


Katie and Luke have both recorded an incorrect answer of 50 in the answer box.
In her working, Katie has shown a partial step of correctly evaluating the sum of 25 and 35 and is awarded **one mark** for sight of 60.
Luke's working, in contrast, shows no evidence of a correctly evaluated partial step or a complete correct method and therefore is awarded **no marks**.

Priya: 1 mark



Jude: 0 marks



Both Priya and Jude have used a pictorial method to obtain an answer.
Priya has correctly drawn 100 chocolate chips, and crossed out 25 chocolate chips from one end and 35 from the other. However, she miscounts her remaining chocolate chips, giving her an incorrect answer of 42. She is awarded **one mark** for a complete, correct method.
Although Jude has correctly recorded 10 marks representing 100 chocolate chips, he has only subtracted 50 chocolate chips and not 60. His method is therefore not correct and he is awarded **no marks**.

22. (a) 200

1

(b) 8

! Remainder shown

Ignore the remainder, even if incorrect eg, accept

- 8 or 20
- 8 and a bit
- 8.20

1

[2]

23. (a) 150

1

(b) Indicates 575

! Not exact

Accept if closer to 575 than to either 550 or 600

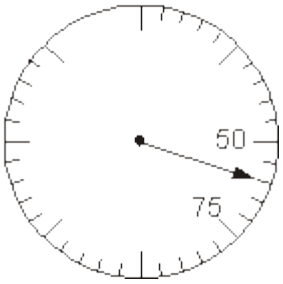
1

[2]

24. (a) 60

1

(b) Indicates the value 60 on the scale, ie



! Follow through from part (a)

Accept provided their (a) is not a multiple of 25 and is not greater than 175

! Inaccurate indication

Accept provided the pupil's intention is clear

eg, for 60 accept

- *Indication closer to 60 than to either 55 or 65*

eg, for follow through from 46 accept

- *Indication between 45 and 50*

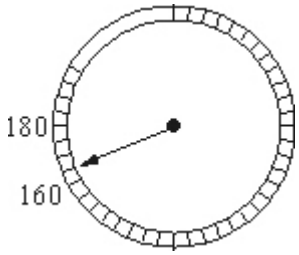
1

[2]

25. (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]

26. 2.29 or equivalent

or Shows the value 22.29 or equivalent

or

Shows both the values 2.56 and 0.27 or equivalent

or

Shows or implies a complete correct method with not more than one computational error, eg

- 12.56 – 10 = 2.56
  10 – 9.73 = 0.37 *(error)*
  2.56 – 0.37 = 2.19

- 12.56 + 9.73 = 21.29 *(error)*
  21.29 – 20 = 1.29
  Do not accept conceptual error, eg

- $\begin{array}{r} 12.56 \\ +\ 9.73 \\ \hline 109.86 \end{array}$
  109.86 – 20 = 89.86

1

[2]

27. (a) Indicates only 3kg, ie

☐

☑

☐

☐

1

(b) Indicates only 300 millilitres, ie

☐

☑

☐

☐

1

[2]

28. Indicates 0.3 litres, ie

- [✓]
- [ ]
- [ ]
- [ ]

1

Indicates 100 grams, ie

- [ ]
- [ ]
- [✓]
- [ ]

1

[2]

29. (a) Indicates only 4 metres, ie

- [ ]
- [ ]
- [✓] 4 metres
- [ ]

1

(b) Indicates only –18°C, ie

☐ ☑ –18°C

☐ ☐

1

(c) Indicates only 3 kilograms, ie

☐ ☐

☐ ☑ 3 kilograms

1

[3]

30. 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]

31. 43

[1]

32. Award **TWO** marks for the correct answer of 7

If both marks are awarded, record by entering 1 in each marking space.

If the answer is incorrect, award **ONE** mark for evidence of appropriate working, eg:
3 × 12 = 36
50 - 36 = 14
14 ÷ 2 = wrong answer

*The working must be carried through to reach an answer for the award of **ONE** mark.*
*Award **ONE** mark by entering 1, 0 in the marking spaces.*

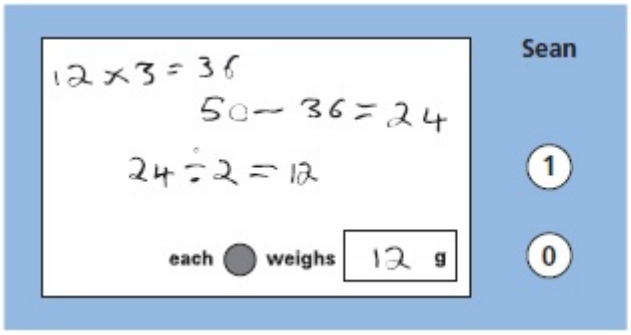
Up to 2m
U1

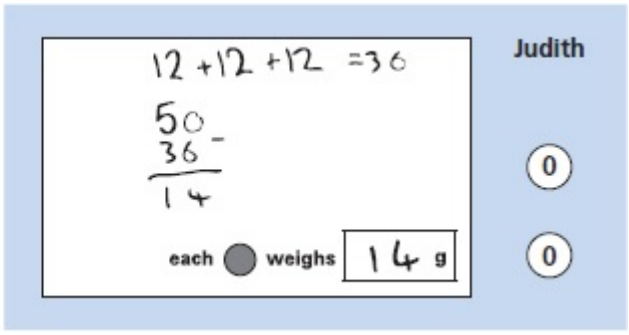
[2]

Example responses

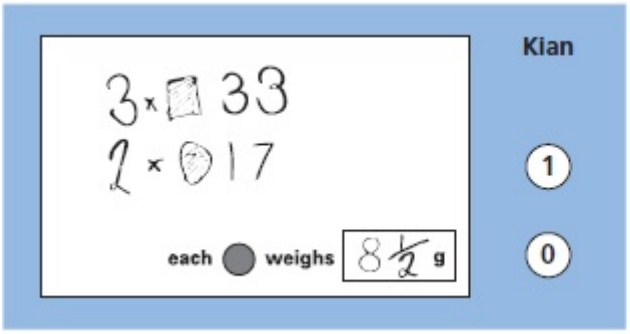
1 mark	0 marks

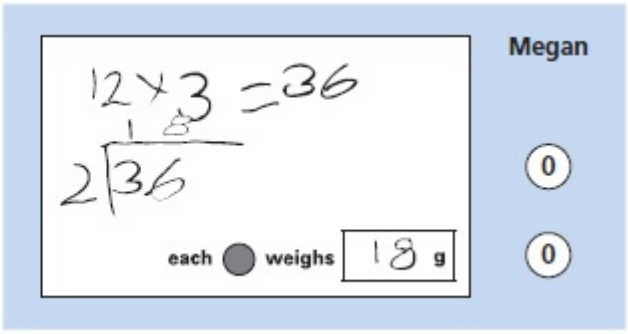
Sean has successfully managed to calculate the weight of the three square blocks. He subtracted his answer from 50g to find the weight of the two circular blocks, and then halved this answer to find the weight of one circular block. While he made an arithmetic error in completing the subtraction, his working is correct and complete and he can therefore be awarded one mark. Judith has carried out the fi rst two of these steps correctly, to calculate the total weight of the two circular blocks. However, she has not completed the problem by finding the weight of a single circular block. She therefore cannot be awarded one mark since her method is incomplete.





Kian attempted to work out the weight of three square blocks, but made an arithmetic error when doing this. We can assume that he used a mental method to fi nd the difference between his answer 33 and 50g, since his second multiplication includes the number 17. He then used a correct mental method to halve 17 to reach a final answer of 8½. Despite the arithmetic error in the fi rst stage of his method, it can be assumed that he used a complete and viable method. Kian can be awarded one mark. Megan has also worked out the weight of the three square blocks. However, she has failed to find the difference between this answer and 50, instead halving her answer of 36. Her method is not correct, so she cannot be awarded one mark.





33. One number circled as shown:

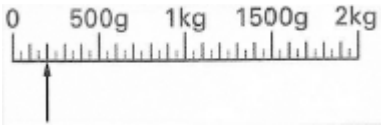
4 **(5)** 6 7 8

Accept any other clear way of indicating the correct number, such as ticking or underlining.

U1

[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 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]

36. 750 g

[1]