## Q1.

The length of an alligator can be estimated by:

- measuring the distance from its eyes to its nose
- then multiplying that distance by 12

What is the difference in the estimated lengths of these two alligators?


Not to scale


2 marks
Q2.
The length of a day on Earth is 24 hours.
The length of a day on Mercury is $58 \frac{2}{3}$ times the length of a day on Earth.
What is the length of a day on Mercury, in hours?


## Q3.

This table shows the areas of the United Kingdom and Jamaica.

| Country | Area <br> (square kilometres) |
| :--- | :---: |
| United Kingdom | 240,000 |
| Jamaica | 10,000 |

The area of the United Kingdom is larger than the area of Jamaica.
How many times larger is the United Kingdom?


Q4.
6 small bricks have the same mass as 5 large bricks.


The mass of one small brick is 2.5 kg .
What is the mass of one large brick?


## Q5.

Here are two similar right-angled triangles.


Write the ratio of side $a$ to side $b$.

$$
a: b=\square:
$$

## Q6.

On a map, 1 cm represents 20 km .

kilometres

The distance between two cities is $\mathbf{2 5 0} \mathbf{~ k m}$.
On the map, what is the distance between the two cities?


Q7.
A stack of 20 identical boxes is 140 cm tall.


Stefan takes three boxes off the top.
How tall is the stack now?


Q8.
Seb had some cherries.
Every day he ate 10 cherries and gave 5 away.

After he gave the last 5 cherries away, he had eaten 40 cherries altogether.


How many cherries did Seb have at the start?


Q9.
Chen is cooking some pasta.

The recipe says he needs 350 grams of pasta for 4 people.


How many kilograms of pasta does he need for 12 people?


## Q10.

Here are the ingredients for chocolate ice cream.

| cream | 400 ml |
| :--- | :---: |
| milk | 500 ml |
| egg yolks | 4 |
| chocolate | 120 g |
| sugar | 100 g |



Stefan has only 300 ml of cream to make chocolate ice cream.
How much chocolate should he use?


Mark schemes

## Q1.

Award TWO marks for the correct answer of 30
If the answer is incorrect, award ONE mark for evidence of an appropriate method, e.g.

- $\quad 17.5 \times 12=210$
$15 \times 12=180$
$210-180=$
OR
- $2.5 \times 12=$

Answer need not be obtained for the award of ONE mark.
Up to $2 m$
[2]

Q2.
Award TWO marks for the correct answer of 1,408

## OR

for an answer in the range of 1,406 to 1,409 inclusive.
If the answer is incorrect, award ONE mark for:

- sight of 1,392


## OR

- evidence of an appropriate method, e.g.
- $24 \times 58 \frac{2}{3}=$ answer

Within an appropriate method, if a decimal equivalent for $\frac{2}{3}$ is given, it must be rounded or truncated to at least 2 decimal places.

- $24 \times 58=1,394$ (error)

2
$\overline{3}$ of $24=16$
$1,394+16=$ answer

- $24 \times \frac{176}{3}=$ answer
- $24 \times 58.67=$ answer.

A final answer is required for the award of ONE mark.

Q3.

Q4.
Award TWO marks for the correct answer of 3.
If the answer is incorrect, award ONE mark for evidence of an appropriate method, e.g.

- $2.5 \times 6=15$
$15 \div 5$
Answer need not be obtained for the award of ONE mark.
Misreads are not allowed.
Up to 2 m


## Q5.

1:4
Accept other equivalent ratios, e.g. 2:8 or 0.5:2
Do not accept reversed ratios, e.g. 4:1 or 8:2

## Q6.

Award TWO marks for the correct answer of 12.5
If the answer is incorrect, award ONE mark for evidence of an appropriate method, e.g.

- $250 \div 20$

OR

- 20 km is 1 cm

100 km is 5 cm
50 km is 2.5 cm
$5 \mathrm{~cm}+5 \mathrm{~cm}+2.5 \mathrm{~cm}$
Answer need not be obtained for the award of ONE mark.
Do not accept incorrect proportions in any step without evidence of the calculation performed.

Up to $2 m$
[2]

Q7.
Award TWO marks for the correct answer of 119.
If the answer is incorrect, award ONE mark for evidence of an appropriate method, e.g.

- $140 \div 20=7$

$$
\begin{aligned}
& 3 \times 7=21 \\
& 140-21
\end{aligned}
$$

## OR

- $140 \div 20=7$
$20-3=17$
$17 \times 7$
Answer need not be obtained for the award of ONE mark.
Up to $2 m$

Q8.
Award TWO marks for the correct answer of 60
If the answer is incorrect, award ONE mark for evidence of appropriate working, eg:

- Ate 10, gave away 5

Ate 40, gave away 20
Ate $40+20=$ wrong answer

- $40 \div 10=4$
$4 \times 5=20$
$20+40=$ wrong answer
Working must be carried through to reach an answer for the award of ONE mark.

Up to 2

Q9.
Award TWO marks for the correct answer of 1.05 kg .
If the answer is incorrect, award ONE mark for evidence of appropriate working, eg:

- $12 \div 4=3$
$350 \times 3=1050$
$1050 \div 1000=$ wrong answer
Do not accept 1050 g
Accept for ONE mark 10.5 or 105 as evidence of appropriate working.
Working must be carried through to reach an answer for the award of ONE mark.

Q10.
Award TWO marks for the correct answer of 90 g .
If the answer is incorrect, award ONE mark for evidence of an appropriate method, e.g:

- $300 \div 400=\frac{\mathbf{3}}{\mathbf{4}}$


## $\frac{3}{4} \times 120$

Answer need not be obtained for the award of ONE mark.

