Q1.
A book has 276 pages.
Amina has read $\frac{1}{3}$ of the book.
How many pages are left for Amina to read?


Q2.
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?


Q3.
The numbers in this sequence increase by equal amounts each time.
Write in the three missing numbers.


2 marks

Q4.
In this diagram, the number in each box is the sum of the two numbers below it.
Write the missing numbers.


Q5.
Amy did a survey of what time people get up on a Sunday morning.

This table shows her results for 150 people.

| Time | number of people |
| :--- | :---: |
| before 7 am | 13 |
| 7:00 am to 7:59 am | 28 |
| 8:00 am to 8:59 am | 59 |
| $9: 00 \mathrm{am}$ to 9:59 am | 36 |
| 10 am and after | 14 |

Look at the table.
How many people get up at $\mathbf{8} \mathbf{a m}$ or later?


1 mark
Amy says,
'Two-thirds of the 150 people in the survey get up before 9 am.'
Amy is correct.
Explain how you know.


1 mark

Q6.
Calculate ${ }^{\frac{\mathbf{3}}{\mathbf{4}}}$ of $£ 15$

Q7.
Karen makes a fraction using two number cards.


She says,

## 'My fraction is equivalent to $\frac{1}{2}$ <br> One of the number cards is $6^{\prime}$

What could Karen's fraction be?
Give both possible answers.


Q8.
Complete these fractions to make each equivalent to $\frac{3}{5}$
$\frac{\square}{\square}$

12


Q9.

Three children do a sponsored silence.


This is a chart of the money they collected.


Estimate how much Sheena collected.

## Together Gary and Pip collected more than £60

Explain how the chart shows this.


1 mark

Q10.
This diagram shows the proportions of waste by weight a family throws away in one year,


Estimate what fraction of the waste is organic.

1 mark
The family throws away about $\mathbf{3 5}$ kilograms of plastic in a year.
Use the diagram to estimate the weight of glass and metal they throw away.


1 mark
The family throws away $\mathbf{1 3 0} \mathbf{~ k g}$ of paper and card.
$70 \%$ of this is newspapers.
What is the weight of newspapers?


2 marks

Q11.
How many quarters are there in $2 \frac{3}{4}$ ?


1 mark

Q12.

Write the missing numbers.
One is done for you.

| Improper fraction | Mixed number |
| :---: | :---: |
| $\frac{7}{4}$ | $1 \frac{3}{4}$ |
| $\frac{\square}{2}$ | $5 \frac{1}{2}$ |
| $\frac{17}{5}$ | $3 \frac{\square}{5}$ |

Q13.
Write the missing fractions.
$\frac{3}{10}+\frac{3}{5}+\square=\frac{7}{5}$
$\frac{5}{12}+\square-\frac{1}{6}=\frac{7}{12}$

Q14.
Join pairs of equivalent fractions.
One is done for you.


Q15.
Write the two missing values to make these equivalent fractions correct.
$\frac{\square}{30}$
$=\frac{10}{12}$
$=\frac{30}{\square}$

Q16.
How many halves are there in 15 ?

1 mark

Q17.
Write these numbers in order of size, starting with the smallest.
1.9
0.96
1.253
0.328

smallest

Q18.
Circle two numbers that add together to equal $\mathbf{0 . 2 5}$
0.05
0.23
0.2
0.5

## Q19.

Write the missing number.


Q20.
Write these numbers in order, starting with the smallest.
0.78
0.607
5.6
0.098
4.003

smallest

## Q21.

Large pizzas cost $£ 8.50$ each.
Small pizzas cost $£ 6.75$ each.
Five children together buy one large pizza and three small pizzas.
They share the cost equally.
How much does each child pay?


Q22.
One gram of gold costs $£ 32.94$
What is the cost of half a kilogram of gold?


## Q23.

Here is a number pyramid.
The number in a box is the product of the two numbers below it.
Write the missing numbers.


## Q24.

Two decimal numbers add together to equal 1
One of the numbers is 0.007
What is the other number?

1 mark

## Q25.

The number 7.5 is halfway between 5 and 10


Write in the missing numbers.
halfway
between


1 mark


## Q26.

Write these numbers in order, starting with the smallest.


Q27.
Here are five number cards.


Use four of the cards to complete these calculations.


Q28.
Here are four digit cards.


Use each digit card once to make the decimal number nearest to $\mathbf{2 0}$


## Q29.

This scale shows the dates of floods and the height of the water in the floods.


How high was the water in the 1955 flood?


1 mark
How much higher was the water in the 1969 flood than in the 1948 flood?

Q30.
Forest School sells badges for charity.


For each badge sold, $£ 1.20$ is given to a charity.
How much does the charity get when $\mathbf{1 2}$ badges are sold?


1 mark
If the charity got $£ 24$, how many badges were sold?


1 mark

## Q31.

Tick ( $\checkmark$ ) the two numbers which have a total of $\mathbf{1 0}$


## Q32.

Here are three supermarket bills.


Tom rounds each bill to the nearest $£ 10$ and then adds them up.
What is the total amount that Tom gets?

## £

Mary adds up the three bills exactly.
What is the total difference between her total and Tom's total?


Q33.
This scale shows the weight of Fred's cat.


What is the weight of Fred's cat?

This scale shows the weight of Fred's dog


Fred's dog


How much more does Fred's dog weigh than his cat?

Q34.
Write the same number in each box to make this correct.


## Q35.

Write these numbers in order.
One has been done for you.


Mark schemes

## Q1.

Award TWO marks for the correct answer of 184
If the answer is incorrect, award ONE mark for:

- sight of 92

OR

- evidence of appropriate method, e.g.
- $\frac{1}{3} \times 276=92$
$92 \times 2=$
- $276 \div 3=92$
$276-92=$
Answer need not be obtained for the award of ONE mark.
Up to 2 marks

Q2.
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:

- $300 \div 400=\frac{3}{4}$ $\frac{3}{4} \times 120$

Answer need not be obtained for the award of ONE mark.
Up to 2

Q3.
Award TWO marks for the sequence completed correctly as shown:


If the answer is incorrect, award ONE mark for two numbers correct.
Up to 2

Q4.
(a) $6 \frac{1}{4}$

Accept equivalent fractions.
Do not accept $5 \frac{5}{4}$
(b) $1 \frac{1}{2}$

Accept equivalent fractions, eg
$1 \frac{2}{4}, \frac{3}{2}, 1.5,150 \%$

## Q5.

(a) 109
(b) An explanation that recognises that 100 people get up before 9am which is two-thirds of the total (150).

- ' $13+28+59=100$ which is two-thirds of the total'
- $\cdot \frac{1}{3}$ of $150=50$ and $2 \times 50=100$,
- ${ }^{\frac{2}{3}}$ of 150 is 100 ,
- ' $36+14=50$ which is one-third after 9am'

Do not accept vague or incomplete explanations, eg:

- 'One-third are 9 o'clock or later'
- '100 got up at 9am'
- 'Twice as many got up before 9am.'
- ' $13+28+59=100$ '

Q6.
£11.25

Q7.
Award TWO marks for both fractions correct as shown:

OR

If the answer is incorrect, award ONE mark for one fraction correct.
Accept fractions written in either order.

## Q8.

Fractions completed as shown below:


12
20
All three fractions must be correct for the award of the mark.

Q9.
(a) Answer in the range of $£ 43$ to $£ 44$ inclusive.
(b) Explanation which implies that Gary has an amount greater than £25 but less than $£ 27.50$ and that Pip has $£ 35 \pm 1$, so that their total is greater than $£ 60$, eg

- 'Gary has 26 Pip has 35 ';
- 'The chart shows that Gary has 2 and $2 / 3$ and Pip has 3 and a half, so that's over 60 pounds';
- 'The whole symbols together make 50 and then it's 2 halves and Pip has half and Gary has more than half'.

Do not accept vague or arbitrary answers, eg

- 'By the number of coins';
- 'There are 5 ten pounds and 2 halves';
- 'A coin = 10 pounds and a broken coin = a fraction of a coin so a fraction of the money'.


## Q10.

(a) An answer in the range $1 / 5$ to $3 / 10$ OR $20 \%$ to $30 \%$

OR 0.2 to 0.3 INCLUSIVE.
Numbers in range 20 to 30 must have \% sign, eg:

- Do not accept ' 25 ’
(b) An answer in the range 15 to 25 kg INCLUSIVE.
(c) Award TWO marks for correct answer of 91 kg .

If answer is incorrect, award ONE mark for appropriate calculation, eg:

- $70 / 100 \times 130=$ wrong answer;
- $10 \%$ is 13 so $70 \% 7 \times 313=$ wrong answer.
- $\mathrm{H}+2 \mathrm{H}+\mathrm{H}+2 \mathrm{H}=126$
- $20+40+20+40=120$

A calculation MUST be performed for award of one mark.
' $70 / 100 \times 130$ ' alone is insufficient for award of one mark.
Up to 2

## Q11.

11 quarters

Q12.


2


## Q13.

$\frac{5}{10}$ or $\frac{1}{2}$ (or equivalent)
$\frac{4}{12}, \frac{2}{6}$ or $\frac{1}{3}$ (or equivalent)

## Q14.

Award TWO marks for three correct pairs joined, as shown.


Award ONE mark for any two correct pairs joined.

## Q15.

$\frac{25}{30}$
$\frac{30}{36}$

## Q16.

30

Q17.
Numbers in order as shown:


## Q18.

Numbers circled as shown:
0.05
0.23

0.5

Accept alternative unambiguous positive indications, e.g. numbers ticked or underlined.

## Q19.

20

## Q20.

Numbers in order, as shown:


## Q21.

Award TWO marks for the correct answer of $£ 5.75$
If the answer is incorrect, award ONE mark for evidence of an appropriate method, e.g:

- $£ 6.75 \times 3=£ 20.25$
$£ 20.25+£ 8.50=£ 28.75$ $£ 28.75 \div 5$

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

## Q22.

Award TWO marks for the correct answer of $£ 16,470$
If the answer is incorrect, award ONE mark for evidence of an appropriate method, e.g:

- $£ 32.94 \times 1000=£ 32,940$
$£ 32,940 \div 2$
OR
- $£ 32.94 \times 500$
$=£ 3294 \times 5$
Answer need not be obtained for the award of ONE mark.


## Q23.

Award TWO marks for three numbers correctly placed.


If the answer is incorrect award ONE mark for two numbers correctly placed.
Commentary: This question involves multiplying and dividing decimals where the answer has up to two decimal places (6F9).

## Q24.

0.993

## Q25.

(a) 4.9

> Accept equivalent fractions and decimals
(b) -0.5

$$
\text { Accept }-\frac{1}{2}
$$

## Q26.

Numbers in order, as shown:
1.28
1.8
8.118
8.12
8.2

Q27.


## AND

$\square$
4.07
$\times$
 $=40.7$
Numbers within calculations may be given in either order.

Q28.
19.42

Q29.
(a) Answer in the range 1.85 to 1.95 exclusive.
(b) 1.8

Q30.
(a) $£ 14.40$

Do not accept £14.4
(b) 20

Do not accept $£ 20$

## Q31.

Two cards ticked as shown:


Accept alternative unambiguous indications such as circling or a line joining the correct pair of cards.

Q32.
(a) $£ 200$
(b) Award TWO marks for the correct answer of 37p OR £0.37

## OR

for finding the correct difference between £199.63 and the answer given for 13a Answer to (a) must be a multiple of $£ 10$ for the award of TWO follow-through marks.

If the answer is incorrect, award ONE mark for evidence of appropriate method, eg
$74.68+65.90+59.05=199.63$

## OR

for evidence of an appropriate method to find the correct difference between $£ 199.63$ and the answer given for (a).

Answer need not be obtained for the award of ONE mark.
Accept for ONE mark £37p OR 0.37p OR £37 as evidence of appropriate method.

Q33.
(a) 4.4
(b) 1.2

## OR

for finding the correct difference between 5.6 and the answer given for part (a)

Q34.
Boxes completed as shown:

| 3.5 |
| :---: |
| +3.5 |
| Accept 3.5 written once. |
| Accept $3^{\frac{1}{2}}$ | = 10.5

## Q35.

All four numbers correctly placed as shown:

|  |
| :---: |
| 3.3 |
| 3.23 |
| 3.2 |
| 3.03 |
| 3 |

All four numbers must be placed correctly for the award of the mark.

Transcription errors are acceptable only if they do not

