Q1.

Circle the number that is $\mathbf{1 0}$ times greater than nine hundred and seven.
9,700
907
970
9,070

Q2.

Here is a number machine.


Here is another number machine.
Write the four missing numbers.


## Q3.

Jack chose a number.
He multiplied the number by 7
Then he added 85
His answer was 953
What number did Jack choose?


Q4.


Q5.
Write the missing digits to make the addition correct.


Q6.
Each diagram below is divided into equal sections.
Shade three-quarters of each diagram.


2 marks

Q7.

Write the two missing values to make these equivalent fractions correct.


Q8.
In this diagram, the numbers in the triangles add together to make the number in the circle.

The number in the square is 6 less than the number in the circle.


Write the four missing numbers in these diagrams.


Q9.
Tick the fractions less than $\frac{5}{8}$


Q10.
Write the three missing digits to make this addition correct.


## Q11.

Write the missing number in each calculation.


Q12.
Write the missing digits to make this addition correct.


Q13.

Write the missing numbers.


Q14.

A pack of paper has 150 sheets.
4 children each take 7 sheets.
How many sheets of paper are left in the packet?

#  

## Q15.

Chen uses these digit cards.


She makes a 2-digit number and a 1-digit number.
She multiplies them together.
Her answer is a multiple of 10
What could Chen's multiplication be?


## Q16.

In this sequence, the rule to get the next number is

Multiply by 2, and then add 3

Write the missing numbers.


Q17.
Write these prices in order, starting with the smallest.


$£ 2.07$

1 mark

Q18.
How much heavier is parcel $\mathbf{A}$ than parcel $\mathbf{B}$ ?


Q19.

## Baby

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


Tick ( $\boldsymbol{\checkmark}$ ) the correct answer.


3 kg


30 kg


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


Tick ( $\boldsymbol{\checkmark}$ ) the correct answer.
$\square$ 3 millilitres300 millilitres3 litres300 litres

Q20.
One jug contains water and the other jug contains oil.


How much more oil is there than water?

## Q21.

A bottle contains 568 millilitres of milk.
Jack pours out half a litre.


How much milk is left?


Q22.

Look at the parcels on the scales.


Write them in order, starting from the lightest.

lightest

Q23.
Put these masses in order, starting with the heaviest.

800 g $\frac{1}{2} \mathrm{~kg}$

1 kg
60 g

heaviest

Q24.
This picture shows the masses of eight kittens.



275 g


410 g


360 g


345 g

What is the difference in mass between the heaviest kitten and the lightest kitten?


The masses of the kittens are to be put in four groups.
Write the missing numbers in the table.
One has been done for you.

| Mass in $\mathbf{g}$ | Number of <br> kittens |
| :---: | :---: |
| $250-299$ |  |
| $300-349$ |  |
| $350-399$ |  |
| $400-449$ | 1 |

## Q25.

The children at Farmfield School are collecting money for charity.
Their target is to collect £360
So far they have collected $£ 57.73$
How much more money do they need to reach their target?


Q26.
Megan wants to fill a bucket with water.
A bucket holds 6 litres.
A jug holds 500 millilitres.
How many jugs of water does Megan need to fill an empty bucket?


Q27.
Write these masses in order, starting with the lightest.
$1.25 \mathrm{~kg} \quad 0.99 \mathrm{~kg} \quad 1.025 \mathrm{~kg} \quad 0.009 \mathrm{~kg}$

lightest

Q28.
Here are four masses.

| 2 |
| :---: |
| kilograms |



Write the masses in order, starting with the lightest.

lightest


Q29.
A machine pours 250 millilitres of juice every 4 seconds.
How many litres of juice does the machine pour every minute?


Q30.

This scale shows the mass of Amy's kitten when it was one month old.



This scale shows the mass of the kitten when it was two months old.


What is the increase in mass?


1 mark

Q31.

potatoes £1.50 per kg

carrots £1.80 per kg

Jack buys $1 \frac{1}{2} \mathrm{~kg}$ of potatoes and $\frac{1}{2} \mathrm{~kg}$ of carrots.
How much change does he get from $£ 5$ ?


Q32.
There are 28 pupils in a class.
The teacher has 8 litres of orange juice.
She pours 225 millilitres of orange juice for every pupil.


How much orange juice is left over?

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

## Q33.

Amina is shopping.
She says,


Write one-quarter on the scales as a decimal.


The cheese costs $£ 1.35$
Amina pays with a $£ 2$ coin.
How much change should Amina get?


Q34.
Stefan has $\mathbf{6 0 0}$ millilitres of water in a bottle.
He pours some of the water into two measuring jugs as shown.


How many millilitres of water are left in Stefan's bottle?


## Q35.

Ally and Jack buy some stickers.


Pack of 12 stickers £10.49


12 stickers
99p each

Ally buys a pack of 12 stickers for $£ 10.49$
Jack buys 12 single stickers for 99p each.
How much more does Jack pay than Ally?


2 marks

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Mark schemes

Q1.
The correct number circled as shown:


Accept alternative unambiguous positive indications, e.g. number ticked.

Q2.
Award TWO marks for all four numbers correct as shown:


If the answer is incorrect, award ONE mark for three numbers correct.
If the answer is incorrect, award ONE mark for two numbers correct AND two numbers appropriately linked, ie


OR

where $\boldsymbol{n}$ is any number.
Up to 2

Q3.
Award TWO marks for the correct answer of 124
If the answer is incorrect, award ONE mark for evidence of an appropriate method, e.g.

- $953-85=868$
$868 \div 7$
Answer need not be obtained for the award of ONE mark If the pupil's evaluation contradicts the appropriate method, the method mark will not be awarded.

Up to 2 m
[2]

Q4.
Award TWO marks for three boxes completed correctly as shown:


If the answer is incorrect, award ONE mark for two boxes completed correctly.
Up to $\mathbf{2 m}$

Q5.


Q6.
Award TWO marks for all three diagrams completed to show three-quarters shaded, e.g.


If the answer is incorrect, award ONE mark for two diagrams correct.
Accept alternative unambiguous indications of parts shaded.
Up to 2 m

Q7.

$$
\frac{2}{3}=\frac{8}{12}=\frac{4}{6}
$$

Q8.
(a) Diagrams completed correctly as shown:

(b)


## Q9.

Award TWO marks for three boxes ticked correctly, as shown:


Award ONE mark for:

- only two boxes ticked correctly and no incorrect boxes ticked

OR

- three boxes ticked correctly and one incorrect box ticked.

Accept alternative unambiguous positive indication of the correct answer, e.g. Y.

Up to $2 m$

Q10.
Award TWO marks for numbers completed, as shown:
$+7427$
(6)0676

Award ONE mark for any two numbers completed correctly.

Q11.
(a) 7
(b) 8

Q12.
Addition completed, as shown

| 1 | 2 | 8 |
| :--- | :--- | :--- | | 7 | 2 |
| :--- | :--- |$=$| 2 | 0 | 0 |
| :--- | :--- | :--- |

All numbers must be correct for the award of the mark.

## Q13.

(a) 68
(b) 35

## Q14.

Award TWO marks for the correct answer of 122
If the answer is incorrect, award ONE mark for evidence of an appropriate method, e.g:

- $\quad 4 \times 7=28$

150-28
Answer need not be obtained for the award of ONE mark.

## Up to 2

Q15.
$95 \times 6$ OR $96 \times 5$

Q16.
(a) 11 written in the first box, as shown:

| 11 | 53 |
| :--- | :--- |

(b) 109 written in the last box, as shown:
$\square 25 \quad 53 \quad 109$

## Q17.

Prices in order, as shown:

| $£ 0.27$ | $72 p$ |
| :---: | :---: |
| 2.07 | $£ 2.70$ |

Accept use of equivalent units, eg 27p.
Accept answers with missing or incorrect units.

## Q18.

150 g

Q19.
(a) Indicates only 3 kg , ie



$\square$
(b) Indicates only 300 millilitres, ie
$\square$


$\square$

Q20.
350

Q21.
68 (ml) OR 0.068 (I)
Do not accept incorrect units, e.g. 68 I OR 0.068 ml .

Q22.
C A B

## Q23.

All masses in the correct order, as shown.
$1 \mathrm{~kg}, 800 \mathrm{~g}, \frac{1}{2} \mathrm{~kg}, 60 \mathrm{~g}$

Q24.
(a) 155
(b) Table completed with three correct numbers, as shown:

| Mass in $\mathbf{g}$ | Number of <br> kittens |
| :---: | :---: |
| $250-299$ | $\mathbf{2}$ |
| $300-349$ | $\mathbf{3}$ |
| $350-399$ | $\mathbf{2}$ |
| $400-449$ | $\mathbf{1}$ |

All three numbers must be correct for the award of the mark. Do not accept tally marks on their own.

Q25.

## Q26.

Award TWO marks for the correct answer of 12
If the answer is incorrect, award ONE mark for
evidence of an appropriate method, eg
6 litres $=6000 \mathrm{ml}$
$6000 \mathrm{ml} \div 500 \mathrm{ml}$
Answer need not be obtained for the award of ONE mark.

## Up to 2

Q27.
Masses in correct order, as shown:

lightest
All masses must be in the correct order for the award of ONE mark.
Accept for ONE mark the masses written in reverse order AND the label lightest has been changed to follow suit. Misreads and transcription errors are not allowed.

Q28.
Masses in order, as shown:


## Q29.

Award TWO marks for the correct answer of 3.75
If the answer is incorrect, award ONE mark for evidence of an appropriate method, e.g.

- $60 \div 4=15$
- $250 \times 15=3750$
- $3750 \mathrm{ml} \div 1000=$

OR

- $250 \div 4=62.5 \mathrm{ml}$ per second
- $62.5 \times 60=3750$
- $3750 \mathrm{ml} \div 1000=$

OR

- $\quad 60 \div 4=15$, so there are 15 lots of 4 seconds in 1 minute so there are 15 bottles per minute.
- There are 4 bottles in 1 litre
- $15 \div 4=$

Accept for TWO marks, 3,750 ml for final answer in working and the answer box blank OR 3,750 in the answer box where the litres has been replaced with millilitres.
Accept for ONE mark 3,750 litres (I) in the answer box OR the final answer in working and answer box blank.
Answer need not be obtained for the award of ONE mark.

Q30.
325

## Q31.

Award TWO marks for the correct answer of $£ 1.85$
If the answer is incorrect, award ONE mark for evidence of an appropriate method, e.g.

- $1 \frac{1}{2} \times £ 1.50=£ 2.25$
$\frac{1}{2}$ of $£ 1.80=70$ p (error) £2.25 + 70p = £2.95
£5-£2.95 =
OR
- $£ 1.50+75=£ 2.25$
$£ 2.25+90=415 p$ (error)
$£ 5.00-415 p=$


## OR

- sight of $£ 3.15$ OR 315 p as evidence of evaluating the correct cost of the potatoes and carrots.

Do not accept misreads for this question.
Answer need not be obtained for the award of ONE mark.
Accept for ONE mark an answer of $£ 185$ or $£ 185$ p as evidence of an appropriate method.

Up to 2 marks

Q32.
Award THREE marks for the correct answer of 1.7 (litres) or 1,700 (ml).
If the answer is incorrect, award TWO marks for:

- sight of 6,300 OR 6.3 as evidence of the multiplication completed correctly

OR

- evidence of an appropriate complete method with no more than one error, e.g.
- $\quad 28 \times 225=6,300$

8 litres $=8,000 \mathrm{ml}$
$8,000-6,300=2,700$ (error)
Award ONE mark for evidence of an appropriate method, e.g.

- $8,000-28 \times 225=$

Unit need not be given for the award of THREE marks. An incorrect unit is treated as one error.
A misread may affect the award of marks. No marks are awarded if there is more than one misread or if the mathematics is simplified.
TWO marks will be awarded for an appropriate complete method with the misread number followed through correctly.
ONE mark will be awarded for evidence of an appropriate complete method with the misread number followed through correctly with one arithmetic error.
If the answer reached in the first part of the calculation gives an answer greater than 8(L) or 8000(ml) and the smaller value is then subtracted from it, ONE mark may still be available.
Answer need not be obtained for the award of ONE mark.

Q33.
(a) 0.25

Do not accept $\frac{1}{4}$ or any other fraction
(b) $\quad 65(\mathrm{p}) \mathbf{O R}(£) 0.65$

Q34.
Award TWO marks for a correct answer of 275
OR
an answer in the range from 270 to 280 inclusive.
If the answer is incorrect, award ONE mark for evidence of appropriate method, e.g.

- $150+175=325$ $600-325=$

OR

- 600-150-165 (error) =

Answer need not be obtained for the award of ONE mark. Accept a reading in the range 170 to 180 ml inclusive for the second jug.
At least one of the measurements must be correct for the award of ONE mark.

Up to $\mathbf{2 m}$

## Q35.

Award TWO marks for the correct answer of $£ 1.39$
If the answer is incorrect, award ONE mark for evidence of an appropriate method, e.g.

- $12 \times 99 p=£ 11.88$
£11.88-£10.49
Accept for ONE mark an answer of £139 OR £139p as evidence of an appropriate method.

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

