SCHOLASTIC

YEAR 4
MATHEMATICS
Termly Assessment Tests

Guidance and mark schemes

Guidance and mark schemes for mathematics: Year 4

About this pack

This pack provides you with termly assessment tests to help support children with end-of-year tests and to assess which skills need further development. The pack consists of this introductory booklet (including mark schemes) and tests that cover a wide range of content taken from the Key Stage 2 programme of study.

Using the termly assessment tests

The tests in this pack can be used as you would any other assessment materials. The children need to be familiar with specific test-focused skills, such as ensuring equipment functions properly, leaving questions if they seem too difficult, working at a suitable pace for the tests and checking through their work.

These tests are short at only 30 or 40 minutes per paper, as they are testing the degree of competence children have.

About the tests

Each maths test has three papers:

- Paper 1: arithmetic – these are context-free calculations. The children have 30 minutes to answer the questions. 40 marks are available.
- Paper 2 and Paper 3: reasoning – these are mathematical reasoning problems both in context and out of context. The children have 40 minutes per paper to answer the questions. 35 marks are available per paper.

The papers should be taken in order and children may have a break between papers. All of the tests broadly increase in difficulty as they progress, and it is not expected that all children will be able to answer all of the questions.

The marks available for each question are shown in the answer booklet next to each question and are also shown next to each answer in the mark scheme.

Test coverage

The test content is divided into strands and sub-strands. These are listed, for each question, in a table on the back cover of every test to allow tracking of difficulties. In a small number of cases, where practical equipment such as containers would be required, these aspects are not tested.

Strand	Sub-strand
Number and place value	counting (in multiples)
	read, write, order and compare numbers
	place value; Roman numerals
	identify, represent and estimate; rounding
	negative numbers
	number problems
Addition, subtraction, multiplication and division (calculations)	add/subtract mentally
	add/subtract using written methods
	estimates, use inverses and check
	add/subtract to solve problems
	multiply/divide mentally
	multiply/divide using written methods
	solve problems (commutative, associative, distributive and all four operations)
Fractions	recognise, find, write, name and count fractions
	equivalent fractions
	compare and order fractions
	add/subtract fractions
	fractions/decimals equivalence
	rounding decimals
	compare and order decimals
	multiply/divide decimals
	solve problems with fractions and decimals
Measurement	compare, describe and order measures
	estimate, measure and read scales
	money
	telling time, ordering time, duration and units of time
	convert between metric units
	perimeter, area
	solve problems (money; length; mass/weight; capacity/volume)

Strand	Sub-strand
Geometry – properties of shape	recognise and name common shapes
	describe properties and classify shapes
	draw and make shapes and relate 2D and 3D shapes (including nets)
	angles – measuring and properties
Geometry – position and direction	patterns
	describe position, direction and movement
	coordinates
Statistics	interpret and represent data
	solve problems involving data

Marking and assessing the papers

The mark schemes and answers are located towards the end of this booklet.

The mark schemes provide details of correct answers including guidance for questions that have more than one mark.

Interpreting answers

The guidance below should be followed when deciding whether an answer is acceptable or not. As general guidance, answers should be unambiguous.

Problem	Guidance
The answer is equivalent to the one in the mark scheme.	The mark scheme will generally specify which equivalent responses are allowed. If this is not the case, award the mark unless the mark scheme states otherwise. For example: 1 ½ or 1.5
The answer is correct but the wrong working is shown.	A correct response will always be marked as correct.
The correct response has been crossed (or rubbed) out and not replaced.	Do not award the mark(s) for legible crossed-out answers that have not been replaced or that have been replaced by a further incorrect attempt.
The answer has been worked out correctly but an incorrect answer has been written in the answer box.	Where appropriate follow the guidance in the mark scheme. If no guidance is given then: ● award the mark if the incorrect answer is due to a transcription error ● award the mark if there is extra unnecessary workings which do not contradict work already done ● do not award the mark if there is extra unnecessary workings which do contradict work already done.
More than one answer is given.	If all answers are correct (or a range of answers is given, all of which are correct), the mark will be awarded unless specified otherwise by the mark schemes. If both correct and incorrect responses are given, no mark will be awarded.

Problem	Guidance
There appears to be a misread of numbers affecting the working.	In general, the mark should not be awarded. However, in two-mark questions that have a working mark, award one mark if the working is applied correctly using the misread numbers, provided that the misread numbers are comparable in difficulty to the original numbers. For example, if '243' is misread as '234', both numbers may be regarded as comparable in difficulty.
No answer is given in the expected place, but the correct answer is given elsewhere.	Where an understanding of the question has been shown, award the mark. In particular, where a word or number response is expected, a pupil may meet the requirement by annotating a graph or labelling a diagram elsewhere in the question.

Formal written methods

The following guidance, showing examples of formal written methods, is taken directly from the National Curriculum guidelines. These methods may not be used in all schools and any formal written method, which is the preferred method of the school and which gives the correct answer, should be acceptable.

Short multiplication

24 × 6 becomes

$$
\begin{array}{r}
2\ 4 \\
\times\ \ \ \ 6 \\
\hline
1\ 4\ 4 \\
{}_2
\end{array}
$$

Answer: 144

342 × 7 becomes

$$
\begin{array}{r}
3\ \ 4\ \ 2 \\
\times\ \ \ \ \ \ \ 7 \\
\hline
2\ \ 3\ \ 9\ \ 4 \\
{}_2\ \ \ \ _1
\end{array}
$$

Answer: 2394

2741 × 6 becomes

$$
\begin{array}{r}
2\ \ 7\ \ 4\ \ 1 \\
\times\ \ \ \ \ \ \ \ \ \ 6 \\
\hline
1\ \ 6\ \ 4\ \ 4\ \ 6 \\
{}_4\ \ \ _2
\end{array}
$$

Answer: 16446

Short division

98 ÷ 7 becomes

$$
\begin{array}{r}
1\ \ 4 \\
7\ \overline{\smash{)}\ 9\ {}^2 8}
\end{array}
$$

Answer: 14

432 ÷ 5 becomes

$$
\begin{array}{r}
8\ \ 6\ \ \text{r2} \\
5\ \overline{\smash{)}\ 4\ \ 3\ \ {}^3 2}
\end{array}
$$

Answer: 86 remainder 2

496 ÷ 11 becomes

$$
\begin{array}{r}
4\ \ 5\ \ \text{r1} \\
11\ \overline{\smash{)}\ 4\ \ 9\ \ {}^5 6}
\end{array}
$$

Answer: $45\frac{1}{11}$

National standard in maths

The mark that each child gets in the test paper will be known as the 'raw score' (for example, '62' in 62/110). The raw score will be converted to a scaled score and children achieving a scaled score of 100 or more will achieve the National Standard in that subject. These 'scaled scores' enable results to be reported consistently year-on-year.

The guidance in the table below shows the marks that children need to achieve to reach the National Standard. This should be treated as a guide only, as the number of marks may vary. You can also find up-to-date information about scaled scores on our website: www.scholastic.co.uk/nationaltests

Marks achieved	Standard
0–57	Has not met the national standard in mathematics for Year 4
58–110	Has met the national standard in mathematics for Year 4

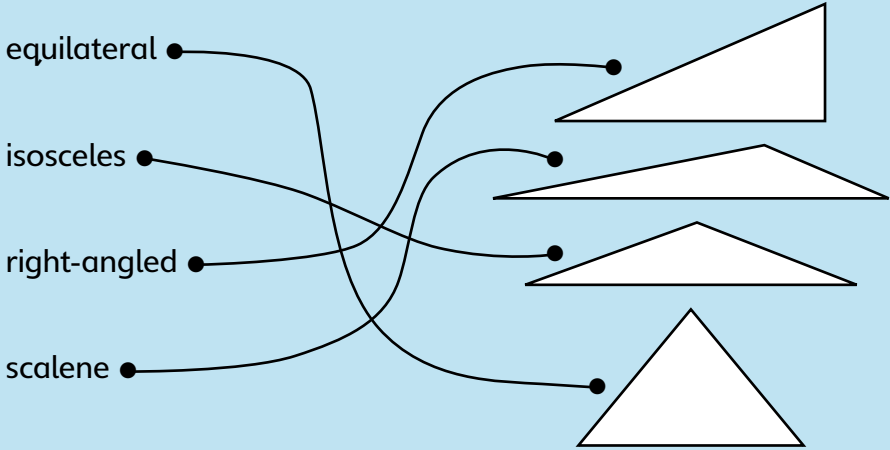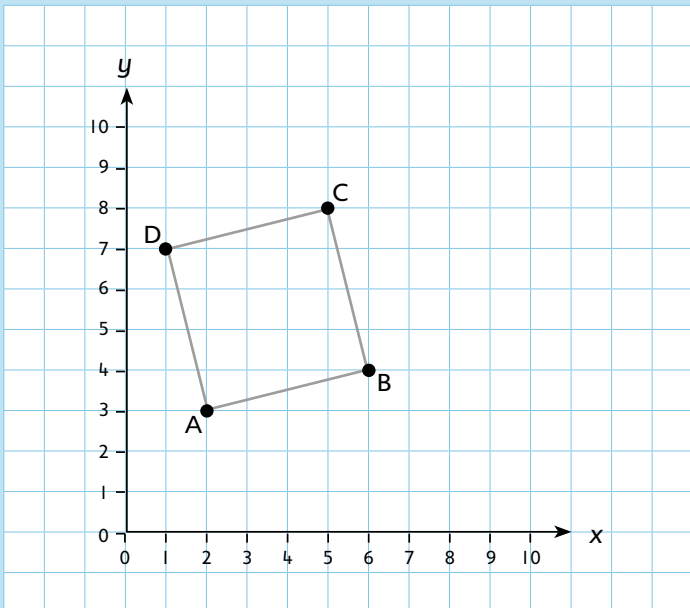# Mark scheme Test A: Paper 1

Q	Answers	Marks
1	3	1
2	15	1
3	28	1
4	4	1
5	4135	1
6	21	1
7	800	1
8	$\frac{2}{7}$	1
9	55	1
10	35	1
11	213	1
12	3300	1
13	93	1
14	0.2	1
15	$\frac{5}{6}$	1
16	200	1
17	9	1
18	5.4	1
19	3375	1
20	1440	1
21	373	1
22	6300	1
23	$\frac{5}{8}$	1
24	99	1
25	200	1
26	2616 Award 1 mark for a correct written method for short multiplication but with one arithmetic error.	2
27	0.03	1

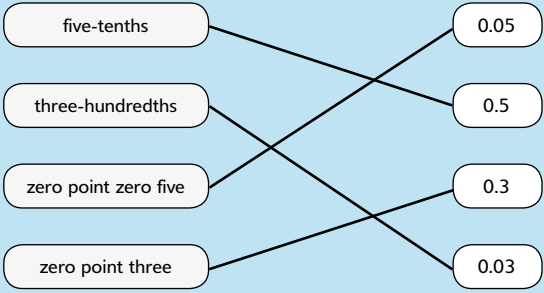| Q	Answers	Marks
28	142 Award 1 mark for a correct written method for short division but with one arithmetic error.	2
29	60	1
30	2691	1
31	4386	1
32	5300 Award 1 mark for a correct written method for short multiplication but with one arithmetic error.	2
33	9861	1
34	18	1
35	4671	1
36	273 r 1 Award 1 mark for a correct written method for short division but with one arithmetic error.	2
	Total	**40**

Mark scheme Test A: Paper 2

Q	Answers	Marks
1	$\frac{1}{9}$	1
2	22	1
	8	1
3	25	1
4	−2	1
5	$\begin{array}{r} 138 \\ \times \quad 3 \\ \hline 414 \end{array}$ Award 1 mark if only one answer is correct.	2
6	Five thousand, three hundred and four	1
7	55p or £0.55 Award 2 marks for the correct answer. Award 1 mark for a correct formal method but the incorrect answer. £7.35	2 1
8	3 9 5 Award 1 mark only if all answers are correct.	1
9	20	1
10		1

1000 less	Number	1000 more
1325	2325	3325
7265	8265	9265
3037	4037	5037
4005	5005	6005
0	1000	2000

Award 1 mark only if all answers are correct.

Q	Answers	Marks
11	5500	1
12	2383	1
	433	1
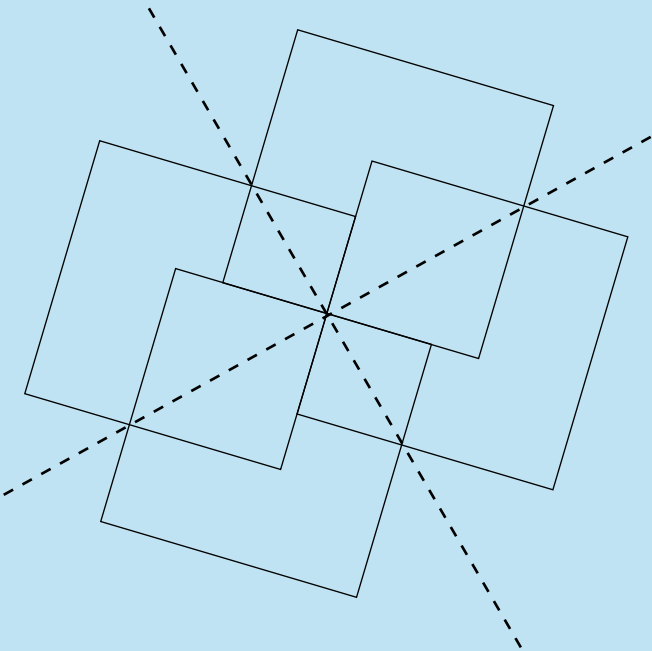
Q	Answers	Marks
13	Award 1 mark only if all answers are correct.	1
14	100 letters	1
	700 sacks	1
15	1 hour 56 minutes Do not award a mark for 1.56 hours (incorrect notation).	1
	12:26pm If pm has not been included in answer, do not award mark.	1
16	60cm	1
17	1 and 15 or 15 and 1	1
18	Check that A, B and C have been plotted correctly and joined to form a square: A(2, 3), B(6, 4), C(5, 8), Award 1 mark only if all points A, B and C have been plotted correctly.	1
	Check that D has been plotted correctly (1, 7).	1
	(1,7) Do not award a mark for (7, 1) (incorrect notation).	1

Q	Answers	Marks
19	4 3 2 5 − 1 **8 0** 8 2 5 1 7	1
20	£2.50 Award 2 marks for the correct answer. Award 1 mark for a correct formal method for division but an incorrect answer.	2
21	Because the units digit of the answer comes from 7 × 3 = 2<u>1</u>, but the units digit of Ahmet's answer is 5.	1
22	60 children	1
23	30 metres or 3000 centimetres	1
24	£22.25 Award 2 marks for the correct answer. Award 1 mark for a correct formal method for multiplication but an incorrect answer.	2
	Total	**35**

SCHOLASTIC Guidance and mark schemes

Mark scheme Test A: Paper 3

Q	Answers	Marks
1	Check that all three decimals have been correctly positioned. Ambiguous positioning, or numbers positioned between dashes, should not be awarded a mark. Award 1 mark only if all answers are correct.	1
2	18, 24, 30 Award 1 mark only if all answers are correct.	1
3	2389 + 921 = 1468 ✗ 2389 − 921 = 1468 ✔ 1468 + 921 = 2389 ✔ 1468 − 921 = 2389 ✗	1
4	$\begin{array}{r} 875 \\ \times 3\,5\,9 \\ \hline 1234 \end{array}$	1
5	13 chocolates	1
6	4000g	1
	100cm	1
7	0.25 0.5 0.75 Award 1 mark only if all answers are correct.	1
8	£6.80 or 680p Award 2 marks for the correct answer. Award 1 mark for a correct formal method but an incorrect answer.	2
9	3085	1
	4 ones or 4 4 hundreds or 400 4 tens or 40 Award 1 mark only if all answers are correct.	1
	3210	1
10	5 minutes	1
11	$\frac{17}{30}$	1
	$\frac{13}{30}$	1
12	1156 bricks	1

Q	Answers	Marks
13	five-tenths — 0.5 three-hundredths — 0.03 zero point zero five — 0.05 zero point three — 0.3 Award 1 mark only if all answers are correct.	1
14	9p Award 3 marks for the correct answer. Award 2 marks for 12 × 6 = 72 and 72 ÷ 8 = incorrect answer. Award 1 mark for just 12 × 6 = 72.	3
15	Check that angles have been named correctly: top left angle is obtuse; top right angle is acute; lower angle is a right angle. Award 1 mark only if all answers are correct.	1
16	96	1
17	25	1
	$\frac{28}{100}$ or $\frac{7}{25}$ or $\frac{14}{50}$ Award 1 mark for 100 − 72 = 28	1
18	£800	1
19	3 full cups	1
20	212	1
	28	1
21	700cm If an answer is incorrect, award 1 mark for length of the long side of the shape. 140 + 35 + 35 = 210	2
22	Check that square has been drawn correctly: A (3, 8), B (3, 5), C (6, 8), D (6, 5). Award 1 mark only if all points are plotted correctly.	1
23	$\frac{1}{16}$	1

24		1

Lines of symmetry should be accurate to within 1mm to award mark.

	Total	**35**

Mark scheme Test B: Paper 1

Q	Answers	Marks
1	29	1
2	6	1
3	35	1
4	22	1
5	700	1
6	42	1
7	247	1
8	500	1
9	6.3	1
10	0.3	1
11	678	1
12	36	1
13	4684	1
14	$\frac{3}{5}$	1
15	3562	1
16	$\frac{5}{12}$	1
17	378	1
18	54	1
19	2075	1
20	1601	1
21	4000	1
22	195	1
23	75	1
24	29	1
25	213 Award 1 mark for a correct written method for short divsion but with one arithmetic error.	2
26	2183	1
27	125	1

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Q	Answers	Marks
28	7862	1
29	165	1
30	$\frac{3}{4}$	1
31	975 Award 1 mark for a correct written method for short multiplication but with one arithmetic error.	2
32	0.25	1
33	1365 Award 1 mark for a correct written method for short multiplication but with one arithmetic error.	2
34	4865	1
35	240	1
36	134 r 1 Award 1 mark for a correct written method for short division but with one arithmetic error.	2
	Total	**40**

Q	Answers	Marks
1	 Award 1 mark only if both answers are correct.	1
2	2	1
3	2p	1
	28p	1
	13p	1
4	91, 98, 105 Award 1 mark only if all answers are correct.	1
5	$\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{6}$ Award 1 mark only if all answers are correct.	1
6	6742	1
7	1 ant 2 pencil 3 dad 4 aeroplane 5 road Award 1 mark only if all answers are correct.	1
	1750mm	1
8	54 blackberries	1
9	555, 999, 1005, 1009, 5999, 9555 Award 1 mark only if all answers are correct.	1
10	7000 2000 6000 Award 1 mark only if all answers are correct.	1
11	4299 children	1
12	(table below) Award 1 mark only if all answers are correct.	1
	An angle that is less than one right angle or less than 90 degrees.	1
13	115 miles	1

Angle	a	b	c	d
Type	Obtuse	Obtuse	Acute	Acute

Q	Answers	Marks
14	944 legs Award 2 marks for the correct answer. Award 1 mark for a correct formal written method but an incorrect answer.	2
15	Check that point D has been plotted and labelled correctly. Award mark only if connecting lines are accurate to within 1mm. (7, 7) Check that the centre has been plotted correctly as (5, 5).	1 1 1
16	7 children	1
17	Check that hands have been drawn correctly to show 2:35. 45 minutes or three-quarters of an hour.	1 1
18	£16	1
19	Check that ticks have been written beside these statements: ● All sides are the same length. ● Opposite sides are parallel. ● Opposite angles are equal. Award 1 mark only if all answers are correct.	1
20	$\frac{1}{4}$ 10 apples	1 1
21	1 5 4 3 − 7 1 8 8 2 5 Award 1 mark only for correct answer.	1
22	87 birds Award 2 marks for the correct answer. Award 1 mark for a correct formal method but an incorrect answer.	2
23	£13.50 or 1350p Do not award mark for incorrectly presented price.	1
24	4pm 11pm and 10am	1 1
	Total	**35**

Mark scheme Test B: Paper 3

Q	Answers	Marks
1	Check that one triangle and one hexagon have been shaded. Award 1 mark for clear identification of any one of each shape. triangle (accept equilateral triangle) hexagon Award 1 mark only if both names are correct.	1 1
2	0.9, 0.91, 0.99, 1.0, 1.1 Award 1 mark only if all answers are correct.	1
3	1 7 8 Award 1 mark only if all answers are correct.	1
4	2p Award 2 marks for the correct answer. Award 1 mark for the correct total of the two books (£14.98) but an incorrect answer. 7 weeks	2 1
5	60 metres or 60m Award 2 marks for the correct answer. Award 1 mark for the correct perimeter of both squares (40m and 20m) but an incorrect answer.	2
6	−5	1
7	288 miles Award 2 marks for the correct answer. Award 1 mark for a correct formal method but an incorrect answer.	2
8	XXXIV	1
9	1000ml egg cup mug vase bottle 10 times	1 1 1
10	3	1
11	Eight hundred or 800	1
12	2700 seconds Award 2 marks for the correct answer. Award 1 mark for a correct formal method or a correct approach to converting minutes to seconds but an incorrect answer.	2

Q	Answers	Marks

13

	All sides equal	Opposite sides equal
All angles equal	square	rectangle
Opposite angles equal	rhombus	parallelogram

Award 1 mark only if all answers are correct.

1

kite   trapezium

1

14   1211

1

7939

1

15   0.43

1

16

Award 1 mark only if all answers are correct.

1

17 $\frac{1}{2}$ of 38

1

$\frac{5}{8}$

1

Eye colour	Blue	Not blue
Children	9	15

Award 1 mark only if both answers are correct.

1

18   Check that ticks are beside these statements:
Walking is the most popular form of travel.
As many people walk or cycle as use the other types of transport.
Award 1 mark only if both answers are correct.

1

19   3565

1

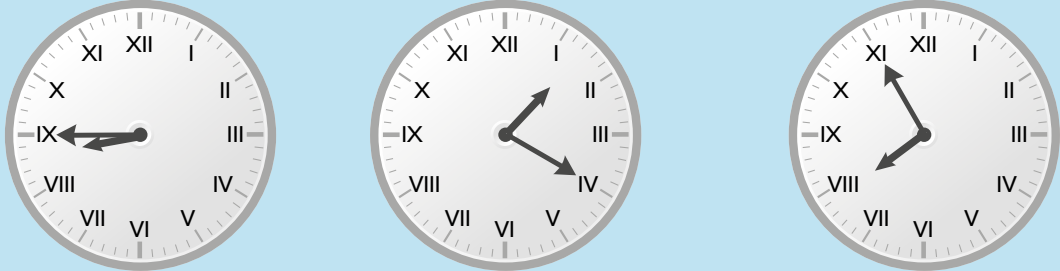| Q	Answers	Marks
20	42,871	1
	75,356	1
21	£900 ◼SCHOLASTIC Award 2 marks for the correct answer. Award 1 mark for correctly halving £9000 (answer £4500) but an incorrect answer.	2
	Total	**35**

Mark scheme Test C: Paper 1

Q	Answers	Marks
1	2	1
2	54	1
3	56	1
4	95	1
5	7	1
6	101	1
7	3243	1
8	442	1
9	90	1
10	1	1
11	10	1
12	289	1
13	120	1
14	736	1
15	175	1
16	0.4	1
17	35.2	1
18	48	1
19	170	1
20	125	1
21	5357	1
22	4300	1
23	143 r2 Award 1 mark for an incorrect answer but with a correct demonstration of an appropriate method.	2
24	25	1
25	0.72	1
26	748	1
27	$\frac{1}{6}$	1
28	25	1
29	0.2	1
30	762 Award 1 mark for an incorrect answer but with a correct demonstration of an appropriate method.	2

Q	Answers	Marks
31	594	1
32	71 Award 1 mark for an incorrect answer but with a correct demonstration of an appropriate method.	2
33	1369	1
34	165	1
35	6174	1
36	780 Award 1 mark for an incorrect answer but with a correct demonstration of an appropriate method.	2
	Total	**40**

Mark scheme Test C: Paper 2

Q	Answers	Marks
1	30 36 42 **48** **54** 60 45 54 63 **72** **81** 90 75 100 **125** **150** 175 200	1 1 1
2	$3 \times 5 = 15$ ✓ $5 \times 4 = 20$ ✓ $6 \times 8 = 54$ ✗ $9 \times 10 = 90$ ✓ $7 \times 3 = 22$ ✗ Award mark only if all are marked appropriately.	1
3	Line should connect the centre of the scales to the '70' line. Allow a maximum of 1mm divergence either side.	1
4		1
5	$\frac{1}{10}$, $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$ Accept correct alternatives.	1
6	$-3°C$ Only award mark if the line is within 1 or 2mm of the $-3°C$ mark on the thermometer.	1
7	Area = $29m^2$ Perimeter = $26m$	1 1
8	11am and 3pm	1

Q	Answers	Marks
9		1

Equivalent to $\frac{1}{5}$	Equivalent to $\frac{1}{2}$	Equivalent to $\frac{5}{7}$
$\frac{3}{15}$	$\frac{5}{10}$	$\frac{10}{14}$
$\frac{2}{10}$	$\frac{4}{8}$	$\frac{15}{21}$

Only award 1 mark if all answers are correct.
Award 1 mark for any two, fractions that are both equivalent to $\frac{1}{4}$, e.g. $\frac{2}{8}$ and $\frac{3}{12}$ — **1**

10
```
    1 4 3
  ×     5
  ───────
  7 8 2
```
— **1**

11

37 — **1**

12 A: (2,2) , B: (8,6) — **1**
C: (5,4) — **1**

13 1068 parking spaces — **1**

14 8 chocolates — **1**

15 $\frac{3}{10}$ — **2**
Award one mark for correct demonstration of adding and subtracting fractions but with an incorrect answer.

16
```
    1 3 6 2
  −   7 5 4
  ─────────
      6 0 8
```
754 + 608 = 1362 or 608 + 754 = 1362 — **1**

17 — **1**

Angle	a	b	c	d
Type	obtuse	right-angle	obtuse	acute

An obtuse angle is an angle that is greater than 90° and less than 180°. — **1**

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Q	Answers	Marks
18		1
	Award 1 mark only if all three clocks are accurate, with hands within one minute of the correct hour or minute.	
	4 hours and 35 minutes	1
	795 minutes	1
19	174 × 3 = 522 Award one mark for correct approach to written method but with an incorrect answer.	2
20	14 weeks	1
21	1819 feet	1
22	£17.82 Award one mark only for evidence of correct order of operations and correct written methods, but with an incorrect answer.	2
	Total	**35**

Q	Answers	Marks
1	$\begin{array}{r} 2\,\mathbf{6}\,6 \\ +\,\mathbf{3}\,5\,7 \\ \hline 6\,2\,3 \end{array}$	1
2	154 368 415 514 638 836	1
	Check that two correct numbers have been used and that the inequality statement is correct.	1
3	pencil pen apple book mobile phone	1
4	<table><tr><th>Has all sides equal</th><th>Does not have all sides equal</th></tr><tr><td>A B E</td><td>C D</td></tr></table>	1
5	$\frac{1}{2} = \frac{2}{4}$, but there is more than one possible answer for the inequalities e.g. $\frac{2}{3} > \frac{1}{3}$; $\frac{1}{3} < \frac{3}{4}$ Award 1 mark only if all three number sentences are true.	1
6	eight thousand three hundred seventy zero (accept 'no ones') Award mark only if all spellings are clearly correct	1
7	$\begin{array}{r} 2\,5\,\mathbf{3} \\ 3\overline{)\mathbf{7}\,5\,9} \end{array}$	1
8	3.482km 720 seconds	1 1
9	3745	1
	4000 3700 3750 Only award mark if all three are correct.	1
10	1280 table legs Award one mark for correct approach and procedure in working, but with an incorrect answer.	2
11	Three points should be positioned at (7,2), (7,7) and 2,7). Only award a mark if all three are accurate within 2mm of the texact point.	1
	B, C and D can vary depending on how children label their work. Check that coordinates are correct for each point.	1

Q	Answers	Marks
12	270 eggs	1
13	525 metres	1
14	14: four ones 1.4: four tenths 0.14: four hundredths To change 14 to 0.14, you must divide it by 100.	1 1
15		1
16	 All lines should be accurate to within 1mm. All lines should be accurate to within 1mm.	1 1
17	1m 29cm Award one mark for correct approach and procedure in working, but with an incorrect answer.	2
18	5 children	1
19	Any combination of either January or April with July or August. 70mm of rain. Quarter 4 was the wettest. It had 210mm of rain.	1 1 1
20	12 seeds with 4 left over Award one mark for correct approach and procedure in working, but with an incorrect answer.	2
21	90	1
22	9500 people 511 unsold tickets	1 2
	Total	**35**