



Day 1

Arithmetic Questions

1

412,035 = 407,035 + 5,000

412,035

1 mark

2

4 - 12 = _____

-8

1 mark

3

23 x 45 = _____

45
x 23
700
135
1035

1,035

1 mark

4

560 ÷ 7 = _____

56 ÷ 7 = 8

80

1 mark

5

364 x 9 = _____

364
x 9
3276
53

3,276

1 mark

1

Fill in the missing digits in this calculation.

$$\begin{array}{r} 2 \boxed{4} 6 \\ \times \quad \quad 3 \\ \hline \boxed{7} 3 \boxed{8} \end{array}$$

1 mark

2

Here is a number sentence:

$$35 + \boxed{} < 71$$

Circle all the numbers below that make the number sentence correct.

60 12 30 39 71

1 mark

3

Emily chose a number.

She halved the number then added ten to the result.

Her answer was thirty-five.

What was the number she started with? 50

$$35 - 10 = 25 \quad 25 \times 2 = 50$$

1 mark



Day 1

Reasoning Questions

4

Complete the table below by rounding each number following the rule given.

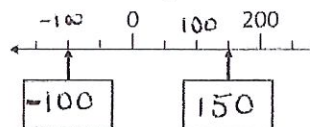
Starting Number	Rounded to the nearest 10.	Rounded to the nearest 1,000.	Rounded to the nearest 100,000.
345,281	<u>345,280</u>	<u>345,000</u>	<u>300,000</u>
100,759	<u>100,760</u>	<u>101,000</u>	<u>100,000</u>
679,099	<u>679,100</u>	<u>679,000</u>	<u>700,000</u>
350,123	<u>350,120</u>	<u>350,000</u>	<u>400,000</u>

2 marks

5

Here is part of a number line.

Write the missing numbers in the boxes.



1 mark



Day 2

Arithmetic Questions

1

$\frac{2}{3} + \underline{\hspace{2cm}} = 1\frac{1}{3}$									
$\quad \quad \quad = \frac{4}{3}$									
$\frac{2}{3}$									

1 mark

2

$345 \times 18 = \underline{\hspace{2cm}}$									
$\begin{array}{r} 345 \\ \times 18 \\ \hline 2760 \\ 3450 \\ \hline 6210 \end{array}$									
6,210									

1 mark

3

$0.23 \times \underline{\hspace{2cm}} = 230$									
1000									

1 mark

4

$2,456 \div 6 = \underline{\hspace{2cm}}$									
$\begin{array}{r} 409 \text{ r } 2 \\ 6 \overline{) 2456} \\ \underline{24} \\ 56 \\ \underline{54} \\ 2 \end{array}$									
409 r 2									

1 mark

5

$58,246 - \underline{\hspace{2cm}} = 51,005$									
$\begin{array}{r} 58246 \\ - 51005 \\ \hline 7241 \end{array}$									
7,241									

1 mark

1

The table below shows the highest and lowest temperatures recorded in different cities around the world.

City	Day time temperature °C	Night time temperature °C
London	21	14
Paris	11	-4
Madrid	27	2
New York	38	-12

- a. Which day has the greatest difference between the day temperature and night temperature? New York 1 mark
- b. What is the difference between the night temperatures in Paris and Madrid? 6 -4 and 2 1 mark

2

In the supermarket storeroom, there are

7 boxes of tomato soup

5 boxes of peas soup

4 boxes of chicken soup

There are 24 tins in every box.

How many tins of soup are there altogether? 384 1 mark

$$\begin{array}{r} 24 \\ \times 16 \\ \hline 240 \\ 144 \\ \hline 384 \end{array}$$

$$7 \times 5 + 4 = 16$$



Day 2

Reasoning Questions

3

$$22 \boxed{5} 3 \div 7 = 321 \text{ r } 6$$

$$\begin{array}{r} 321 \\ \times 7 \\ \hline 2247 \end{array}$$

What digit goes in the missing box? Prove it.

$$321 \times 7 = 2,247$$

Add the remainder 6 \rightarrow 2,253

1 mark

4

Circle the number that is 100 times greater than 406.

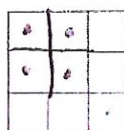
460 406 4600 40600 4060 46000

1 mark

5

The diagram is made of squares.

What fraction of the diagram is shaded? 5/9



$$\frac{5}{9}$$

1 mark



Day 3

Arithmetic Questions

1

$450.8 \div 10 = 45.08$

450.8

1 mark

2

$34 + 5^2 = 7 \times 9 -$

$34 + 25 = 59$

$7 \times 9 = 63$

$63 - 59 = 4$

4

1 mark

3

$\frac{4}{5} - \frac{2}{10} = \frac{6}{10} = \frac{3}{5}$

$\frac{3}{5}$

1 mark

4

$7,749 \div 13 =$

596 r1

$10 \times 13 = 130$

$5 \times 13 = 65$

$6 \times 13 = 78$

$9 \times 13 = 117$

1 mark

5

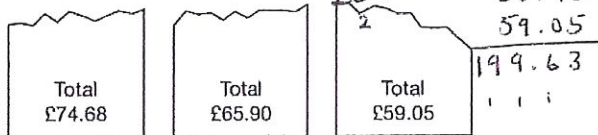
$8,576 \times 5 =$

42,880

1 mark

1

Here are three supermarket bills.



a. Tom rounds each bill to nearest £10 and adds them up.

What is the total amount that Tom gets? £200

1 mark

b. Mary adds up the three bills exactly. What is the total

difference between her and Tom's total? 37p

$200 - 199.63$

1 mark

2

Is it always, sometimes or never true that a square number has an even number of factors? Circle the correct answer.

Always Sometimes Never

Explain.

Factors of 16 (4^2): 1, 16, 2, 8, 4

Factors usually come in pairs.

With a square number, the factor is multiplied by itself.

There is an odd number of factors.

1 mark



Day 3

Reasoning Questions

3

Write the missing numbers to make the multiplication grid correct.

x	7	0.2	3
30	210	6	90
6	42	1.2	18

1 mark

4

Draw two more lines to match 3500 to numbers with the same value



1 mark

5

Circle all the numbers that are factors of 120.

18 32 15 16 6

1 mark



Day 4

Arithmetic Questions

1

$5 \times 8 \times 3 =$									
$5 \times 8 = 40$									
$40 \times 3 = 120$									
120									

1 mark

2

$\frac{2}{3} - \frac{1}{4} =$									
$\frac{8}{12} - \frac{3}{12} = \frac{5}{12}$									
$\frac{5}{12}$									

1 mark

3

$\quad = 3^2 + 6^2$									
$= 9 + 36$									
45									

1 mark

4

$-9 + 6 =$									
-3									

1 mark

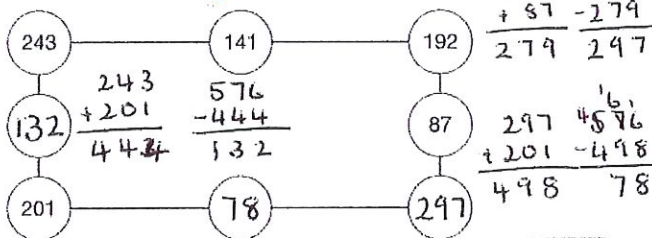
5

$564 \times 29 =$									
$\begin{array}{r} 564 \\ \times 29 \\ \hline 5076 \\ 11280 \\ \hline 16356 \end{array}$									
16,356									

1 mark

1

Each side of the square has a total of 576. Write in the missing values in the circles below.



2 marks

2

The numbers in this sequence increase by 3 each time.

2, 5, 8, 11, 14

The sequence continues in the same way. Will the number 333 be in the sequence?

Circle Yes or **No** Explain how you know.

333 is divisible by 3. We started counting at 2, not 0.

333 + 2 would be in the sequence.

1 mark



Day 4

Reasoning Questions

3

Mr Smith is looking at the prices of 5 mansions. He wants to look at mansions costing between £885,000 and £1,150,000. Write the letters of the mansions he looks at.

A ✓	B ✗	C ✓	D ✓	E ✗	F ✓
£885,100	£1,602,000	£1,108,000	£897,990	£1,510,000	£1,015,000

A, C, D, F

1 mark

4

The perimeter of a rectangular garden is between 40 and 50 metres. What could the dimensions of the garden be?

e.g. 20m and 2m (Dimensions need to add up to 21, 22, 23 or 24)

1 mark

5

20 pieces eaten $\frac{4}{24}$ left $\frac{1}{6}$
A bar of chocolate has 24 pieces. Alan eats 3 bits, Emily eats 8 bits and Tony eats 9 bits. What fraction of the chocolate bar is left? Write the answer in its simplest form. $\frac{1}{6}$

1 mark



Day 5

Arithmetic Questions

1

$8,574 \div 14 =$ _____

6	1	2	r	6	10	\times	14	=	140
14	8	5	7	4	5	\times	14	=	70
					6	\times	14	=	84
					2	\times	14	=	28

612r6

1 mark

2

$\frac{2}{5} \times 3 =$ _____

$\frac{2}{5}$	+	$\frac{2}{5}$	+	$\frac{2}{5}$	=	$\frac{6}{5}$	=	$1\frac{1}{5}$
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$1\frac{1}{5}$

1 mark

3

_____ $\div 1,000 = 0,03$

30

1 mark

4

$\frac{3}{5}$ of 900 = _____

6									
10									
1	=	90							
10									
6	=	90	\times	6					
10									

540

1 mark

5

$8,576 \times 23 =$ _____

8	5	7	6						
\times	2	3							
1	7	1	5	2	8				
2	5	7	2	8					
1	9	7	2	4	8				

197,248

1 mark

1

Joshua was given £24 birthday money. He spent $\frac{2}{8}$ on Monday.

How much money did he have left? £18

$\frac{1}{2} = £12$ $\frac{1}{4} = 6$

$24 - 6 = 18$

1 mark

2

A school hall needs to lay out 1418 chairs. If the caretaker organises them 22 chairs per row, how many rows will he need to lay out? 65

$22 \overline{) 1418}$
 $\begin{array}{r} 65 \text{ r } 10 \\ 132 \\ \hline 98 \\ 88 \\ \hline 10 \end{array}$
 $\begin{array}{r} \times 10 \quad 220 \\ \times 5 \quad 110 \\ \hline \times 6 \quad 132 \\ \times 4 \quad 88 \end{array}$

3

Find the values of the three different shapes in the puzzle below.

$\text{circle} + \text{circle} + \text{circle} = 24$ $24 \div 3 = 8$

$\text{circle} + \text{cross} = 25$ $25 - 8 = 17$

$\text{cross} - \text{trapezoid} = 8$ $17 - 8 = 9$

$\text{cross} + \text{circle} + \text{trapezoid} = \text{34}$

$\text{circle} = 8$ $\text{cross} = 17$ $\text{trapezoid} = 9$

1 mark



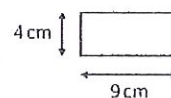
Day 5

Reasoning Questions

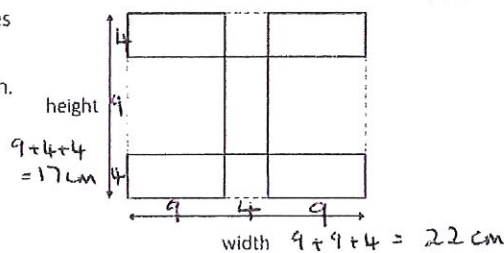
4

Kim has some rectangular tiles.

Each one is 4 centimetres by 9 centimetres.



She makes a design with them.



Calculate the width and height of her design.

$W = 22 \text{ cm}$ $H = 17 \text{ cm}$

1 mark

5

I think of a number. I subtract 25 and add 2.

I then multiply by 2. My answer is 154, what was my number?

100

$154 \div 2 = 77$
 $77 - 2 = 75$

$75 + 25 = 100$

1 mark