Y6 Home Learning Pack

## Miss Gibson's Maths Group

## Revision of Spring One Learning

Addition - Choose your chillis and complete the questions

| $1.243+156$ |
| :---: |
| $2.32 I+563$ |
| $3.272+4 I 7$ |
| $4.1546+242 I$ |
| $5.3427+2162$ |


| $1.345+472$ |
| :--- |
| $2.678+23 I$ |
| $3.1768+453$ |
| $4.3452+6738$ |
| $5.5346+765 I$ |


| I. $4537+4675$ |
| :--- |
| $2.3976+5677$ |
| $3.6543+7744$ |
| $4.12378+23290$ |
| $5.3452 I+57429$ |


| I. $245637+36814$ |
| :--- |
| 2. $1342567+453676$ |
| 3. $45.67+38.19$ |
| 4. $456.43+87.95$ |
| 5. $1455.99+765.34$ |

## Addition - Problem Solving and Reasoning

Which digits are hidden underneath the splats?


Use any digit card from 0-9 to create an addition with 1 exchange. You may only use each digit once in any calculation. Your answer must be greater than 782 and less than 858.


Is there more than one possible answer?

Use the digit cards to create addition calculations using two 4 -digit numbers with three exchanges.
5


Find two possibilities.

Find and explain the mistakes.
A.

1a. Gary and Jay are comparing their income.

|  | Earnings | Bonus |
| :---: | :---: | :---: |
| Gary | $£ 17,429$ | $£ 3,846$ |
| Jay | $£ 18,283$ | $£ 1,387$ |

Gary | I earnt more because altogether I |
| :---: |
| earnt above $£ 20,000$. |

I must have had a larger income because my earnings were higher than yours.
Who is correct? Explain why.
3a. Steph completes this sum incorrectly.

|  | 1 | 8 | 4 | 9 | 1 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| + | 1 | 3 | 7 | 2 | 4 |
|  | 3 | 1 | 2 | 1 | 5 |
|  | 1 | 1 | 1 |  |  |

Explain the mistake she has made.

## Addition - Problem Solving and Reasoning

4a. Alan and Oscar are comparing their income.

|  | Earnings | Bonus |
| :---: | :---: | :---: |
| Alan | $£ 28,568$ | $£ 7,099$ |
| Oscar | $£ 24,079$ | $£ 9,865$ |



Jaiden completes this sum incorrectly.

|  | 6 | 3 | 2 | 1 | 8 |
| :--- | :--- | :--- | :--- | :--- | :--- |
|  |  | 4 | 2 | 8 | 9 |
| + | 3 | 4 | 7 | 0 | 3 |
| 1 | 0 | 2 | 1 | 1 | 0 |
|  | 1 | 1 | 1 | 2 |  |

Explain the mistake he has made.

| 1.432-121 | $\text { I. } 657-392$ |
| :---: | :---: |
| 2. 566-345 | 2. 874-683 |
| 3.659-233 | 3. 918-645 |
| 4.\|654-94| | 4. $3419-1613$ |
| 5. 5667-3496 | 5.7628-5919 |


| I. $5132-3981$ |
| :--- |
| 2. $7658-3499$ |
| 3. $11376-9425$ |
| $4.27865-18766$ |
| $5.76481-54449$ |


| L. $456371-321968$ |
| :--- |
| $2.3452098-987639$ |
| $3.84 .78-65.89$ |
| $4.678 .45-131.94$ |
| $5.1657 .65-763.48$ |

## Subtraction - Problem Solving and Reasoning

Match the pairs of numbers which have a difference of 346 .
A.

| $\mathbf{H}$ | $\mathbf{T}$ | $\mathbf{O}$ |
| :---: | :---: | :---: |
|  |  |  |
|  |  |  |

B.

C.

F.
281

Ross and Peter are discussing whether the following subtraction requires an exchange.


Who do you agree with? Explain why.

Tony has used column subtraction to solve this calculation.


Is he correct? Explain how you know.


Find two possible ways.

Use the digit cards to complete the subtraction.


Kai has used column method to answer the subtraction below.


Is he correct? Explain why.


9a. Tim has used column method to answer a subtraction and has written it out below.

8 ten thousands, 200 tens and 9 ones subtract 37 thousands, 98 tens and 3 ones equals 42 thousands, 220 tens and 7 ones.

Is he correct? Explain why.

Multiplication - Choose your chillis and complete the questions

| $1.3 \times 2 \times 4$ | $\text { 1. } 5 \times 6 \times 3$ | $\text { I. } 427 \times 9$ | $\text { I. } 2398 \times 8$ |
| :---: | :---: | :---: | :---: |
| 2. $4 \times 5 \times 2$ | 2. $3 \times 7 \times 5$ | 2. $962 \times 8$ | 2. $54 \times 17$ |
| 3. $36 \times 3$ | 3. $435 \times 6$ | 3. $3241 \times 5$ | 3. $76 \times 24$ |
| 4. $67 \times 5$ | 4. $567 \times 7$ | 4. $4536 \times 6$ | 4. $127 \times 23$ |
| 5. $324 \times 4$ | 5. $1232 \times 4$ | 5. $34 \times 12$ | 5. $254 \times 34$ |

## Multiplication - Problem Solving and Reasoning

Sara multiplies a 2-digit number by a 1-digit number. Which numbers did she use?


Add the missing digits to the calculation below.


Noah and Layla are trying to get an answer near to the target number. Arrange their three digits to make a 2 digit by 1 digit multiplication calculation with the nearest answer.


Jack says,


Cassie solved the calculation below and thinks the answer is 10,808 .

$$
5,207 \times 4
$$

| Th | H | T | O |
| :---: | :---: | :---: | :---: |
|  |  |  |  |

Complete the calculation using a formal method to identify her mistake.

1 A family car costs $£ 4,174$. Mr Jones says the total cost of $\mathbf{4}$ family cars will be £16,696.

| Th |  | H | T | - |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |
| Is he c | X | - |  |  |

## Multiplication - Problem Solving and Reasoning

Dennis is thinking of a number. He gives the following clues:

It is an even 5 -digit number.
It is the result of multiplying a 4-digit number by 12.
The 4-digit number has a digit sum of 5 .

What is the smallest number Dennis could be thinking of?

## A TV package costs $£ 1,419$ per house.

23 houses on Brook Street buy this package. The TV salesperson says the total cost is $£ 32,607$.


Is he correct? Explain your answer.

| $1.32 \div 4$ |
| :--- |
| $2.45 \div 5$ |
| $3.21 \div 7$ |
| $4.54 \div 6$ |
| $5.63 \div 9$ |$|$| 2. $168 \div 7$ |
| :--- |
| $2.336 \div 6$ |
| $3.219 \div 3$ |
| $4.508 \div 4$ |
| $5.1208 \div 5$ |


| $1.427 \div 9$ |
| :--- |
| $2.962 \div 4$ |
| $3.3241 \div 5$ |
| $4.4536 \div 6$ |
| $5.5342 \div 7$ |


| $2.2341 \div 8$ | Instead of <br> remainders <br> divide into the <br> decimals |
| :--- | :--- |
| $2.4571 \div 9$ |  |
| $3.7683 \div 7$ |  |
| $4.8764 \div 6$ |  |
| $5.9546 \div 5$ |  |



Amir is thinking of a number.


Find all the possibilities.
Draw a pictorial representation to support your answer.

Which calculation is the odd one out?


Three children have answered $48 \div 4$.


Who is correct? Explain how you know.

Mary says,

Four hundred and fiftynine divided by nine equals fifty-one remainder two.

Is she correct? Convince me.

Arrange the number cards below to create a calculation which has a remainder of 1 . Complete the calculation.


Division - Problem Solving and Reasoning


Who is correct? Explain your reasoning.

Oranges are packed into nets. One net holds 5 oranges. There are 2,307 oranges. How many nets are needed to hold all the oranges?


Read and write
3,564,789

## Read and write

Four hundred and fifty-two thousand, two hundred and thirteen

Order smallest to largest
2345.54
3456.21
2354.34

Compare

12,342,443
$12,542,546$

Order the numbers starting with the smallest.

$$
\begin{array}{lllll}
3 & -6 & -4 & 7 & -11
\end{array}
$$

Which number is the smallest?
-5 or -6

The temperature is $-11^{\circ} \mathrm{C}$. It rises by 2 degrees.
What is the temperature now?

True or false? The arrow is pointing to -5 on the number line below.


Multiply the middle number by the inner numbers together to get the outer numbers.


Help Captain Salamander to cross the river by shading the stepping stones counting up in 7s.


Count by 7s up to 70

$$
7 \rightarrow \__{-} \rightarrow{ }_{-} \rightarrow{ }_{-} \rightarrow{ }_{-} \rightarrow{ }_{-} \rightarrow{ }_{-}
$$

Fill in the missing numbers in the 7 times table.

$$
7 \times 1=7 \quad 7 \times 2=\quad 7 \times 3=\quad 7 \times 4=\ldots
$$

$7 \times 6=$ $\qquad$ $7 \times 7=$ $\qquad$ $7 \times 8=$ $\qquad$ $7 \times 9=$ $\qquad$ $7 \times 10=$ $\qquad$

Draw lines to match the 7 times table fact to its answer.

| $7 \times 4$ | 70 | $7 \times 1$ | 56 |
| :--- | :--- | :--- | :---: |
| $7 \times 2$ | 42 | $7 \times 3$ | 49 |
| $7 \times 5$ | 28 | $7 \times 8$ | 7 |
| $7 \times 10$ | 14 | $7 \times 7$ | 63 |
| $7 \times 6$ | 35 | $7 \times 9$ | 21 |

$\qquad$ -

## Counting by 25s

1. Count by 25 s .

| $9 \times 1=$ |  |  | $9 \times 6=$ |  |  | $9 \times 3=$ |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 9 | 1 | 10 | 45 | 54 | 56 | 24 | 27 | 28 |
| $9 \times 7=$ |  |  | $9 \times 2=$ |  |  | $9 \times 10=$ |  |  |
| 63 | 64 | 65 | 18 | 16 | 14 | 90 | 110 | 99 |
| $9 \times 12=$ |  |  | $9 \times 9=$ |  |  | $9 \times 5=$ |  |  |
| 108 | 120 | 125 | 63 | 81 | 72 | 40 | 55 | 45 |
| $9 \times 8=$ |  |  | $9 \times 11=$ |  |  | $9 \times 4=$ |  |  |
| 75 | 70 | 72 | 77 | 99 | 88 | 36 | 35 | 32 |

$$
0,25,50
$$

$\qquad$ , $\qquad$ , $\qquad$ , $\qquad$ , $\qquad$
2. What is 25 less than 75 ? $\qquad$
3. What is 25 more than 275 ? $\qquad$
4. Subtroct 25 from 500 . What is the answer? $\qquad$
5. What is 25 less than 250 ? $\qquad$
6. Count by 255 . Circle the numbers you say.

Cross out the ones you do not soy.

| 310 | 375 | 200 | 215 | 150 | 755 |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 55 | 500 | 125 | 205 | 475 | 25 |

7. There are 5 bowls. Each bowl has

25 grapes in it. How many gropes in all? $\qquad$
8. You have seven quarters. How much
money do you have in al? $\qquad$

## Key words

| 2D Shape | A flat shape - they have no thickness. |
| :---: | :---: |
| Polygon | 2D shape |
| Irregular Polygon | The sides of the shape can be different lengths. |
| Regular Polygon | The sides of the shape are the same length. |
| Edge | The point where two sides meet. |
| Vertex | More than one vertex. A square has 4 vertices. |
| Vertices | A shape with four edges and four vertices. |
| Quadrilateral |  |

5a. Circle the regular polygons.


## 7a. True or false?

This is a regular hexagon.


4a. Has Shamir sorted these shapes correctly? Explain your answer.

|  | Regular <br> Polygon | Irregular <br> Polygon |
| :---: | :---: | :---: |
| Has <br> exactly <br> 5 sides | A |  |
| Not 5 <br> sides | B |  |

$\wedge$

6a. How many regular polygons can you see in this shape?


## Key words

| 3D Shape | A shape with three dimensions - height, width and depth |
| :---: | :---: |
| Net | A flattened out three dimensional shape |
| Edge | The side of a shape. |
| Vertex | The point where two sides meet. |
| Vertices | There than one vertex. A cube has 8 vertices. |
| Face |  |

Count and name the 2D shapes in this net.


Which 3D shape does the statement describe?


Match the net to the correct 3D shape.



Match the faces to the correct 3D shapes.
8 square faces

1 square base
square based pyramid
My base is a square and I have 4 triangular faces.

Match the net to the correct 3D shape.


Which 3D shape does the statement describe?

I have five faces. Two faces are triangles and three faces are rectangles.

Count and name the 2D shapes in this net.

Match the faces to the correct 3D shapes.

A square face

2 pentagonal faces
square based pyramid
pentagonal prism

## Key words

| Quadrilateral | A shape with four sides and four vertices. |
| :---: | :---: |
| Right-angle | An angle of exactly $90^{\circ}$ |
| Parallel Lines | Lines that never meet. They are always the same distance apart. |

1b. Draw lines to match the true statements to the shape.


2b. Fill in the blanks to describe the shape.

This shape has $\qquad$ sides. It has $\qquad$ right angles.


3b. Draw the shape using the description below.

The shape has:

- 4 right angles
- 2 pairs of equal sides


## What shape have you drawn?

4b. Circle the quadrilaterals.


5a. Draw lines to match the true statements to the shape.


6a. Fill in the blanks to describe the shape.

This shape has $\qquad$ sides. It has $\qquad$ right angles. It has $\qquad$ sets of parallel sides.
 vF

7a. Draw the shape using the description below.

The shape has:

- No right angles
- 2 pairs of parallel lines

What shape have you drawn?
8a. Circle the quadrilaterals.


6b. Kaleb thinks that the shape matches his statement. Is he correct? Explain your answer.


## Key words

| Radius | A line from the centre of a circle <br> to its perimeter. |
| :---: | :---: |
| Diameter | A straight line passing from side <br> to side through the centre of a <br> circle. |
| Circumference | The distance around the edge of <br> a circle (its perimeter). |



## Key fact

The diameter of a circle is twice the length of its radius.

This means if a circle's diameter is 8 cm , its radius is 4 cm .

This means if a circle's radius is 10 cm , its diameter is 20 cm .


Tick the circle which has a radius of 76 mm .
Use the measurements below to label the radius and diameter.


Match each diameter to its radius.

59m

95m

83m

127m
47.5m
63.5m
29.5m
41.5m



| M | Hth | Tth | Th | H | T | U | . | t | h | th |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |

Fill in the gaps.
$1.433 \mathrm{~m} \longrightarrow$ $\qquad$ cm
2. $3.3 \mathrm{I} \longrightarrow \longrightarrow \mathrm{cl}$
$3.1093 \mathrm{~g} \longrightarrow \longrightarrow \mathrm{~kg}$
4. $5.1 \mathrm{~km} \longrightarrow \longrightarrow \mathrm{~m}$
$5.1532 \mathrm{ml} \longrightarrow$
$6.35 \mathrm{~g} \longrightarrow \longrightarrow \mathrm{mg}$

Find and correct the errors in these conversions:
A. $1,565 \mathrm{~g}=1.565 \mathrm{~kg}$
B. $2.35 \mathrm{~L}=235 \mathrm{ml}$
C. $15 \mathrm{~cm}=150 \mathrm{~mm}$
D. $1,500 \mathrm{~mm}=1.05 \mathrm{~m}$

Put these measurements in order from smallest to largest.


Complete the missing operation and measurement to convert between g and kg .

285g


Complete the following statement.
$3,500 \mathrm{ml}$ is equal to $\qquad$

1a. Luke thinks that his horse ate the most hay on Thursday.

|  | 9 am | 12 pm | 8 pm |
| :---: | :---: | :---: | :---: |
| Wed | 2.5 kg | $3,300 \mathrm{~g}$ | 2.5 kg |
| Thu | 1.5 kg | $3,500 \mathrm{~g}$ | $3,400 \mathrm{~g}$ |

Do you agree? Explain why.


3a. Grace has filled in a table after converting from cm to m .

| cm | m |
| :---: | :---: |
| $2,450 \mathrm{~cm}$ | 25.4 m |
| $3,240 \mathrm{~cm}$ | 34.2 m |
| $4,260 \mathrm{~cm}$ | 46.2 m |

Is her table correct? Explain why.

2a. Mike is practising converting different units of measure.

He says,


What could his starting millilitres have been? Find 3 possibilities.
以

4a. John thinks that his pet snail travelled the farthest on Tuesday.

|  | 9 am | 12 pm | 3 pm |
| :--- | :---: | :---: | :---: |
| Mon | 5.01 m | 120 cm | 471 cm |
| Tue | 149 cm | $1,300 \mathrm{~mm}$ | 200 cm |

Do you agree? Explain why.

5a. Aelin is practising converting different units of measure.

She says,


What could her starting grams have been? Find 3 possibilities.

6a. Joey has filled in a table after converting from ml to L .

| ml | L |
| :---: | :---: |
| 24 ml | 0.042 L |
| 310 ml | 0.13 L |
| $1,820 \mathrm{ml}$ | 1.28 L |

Is his table correct? Explain why.

Remember - perimeter is the distance around the outside of a shape. To find it you must add all the sides. If they are missing you must find the lengths before adding.

Calculate the perimeter of each of these shapes. Write the answer inside the shape. Always check the units of measure and remember that these drawings are not to scale!

14.3 cm

Remember - area is the amount of space a shape takes up. To find it you must multiply the width by the length.

$$
a=w x l
$$

Calculate the area of the following rectangles.
The shapes are not to scale.
1.


2.

3. 8 cm

4.

5. 11 cm

6.


Calculate the area of each rectangle, then calculate the area of the whole compound shape.

| 1. <br> Area a: $\qquad$ $\mathrm{cm}^{2}$ <br> Area b: $\qquad$ $\mathrm{cm}^{2}$ <br> Total: $\qquad$ $\mathrm{cm}^{2}$ | 2. <br> Area a: $\qquad$ $\mathrm{cm}^{2}$ <br> Area b: $\qquad$ $\mathrm{cm}^{2}$ <br> Total: $\qquad$ $\mathrm{cm}^{2}$ |
| :---: | :---: |
| 3. <br> Area a: $\qquad$ $\mathrm{cm}^{2}$ <br> Area b: $\qquad$ $\mathrm{cm}^{2}$ <br> Total: $\qquad$ $\mathrm{cm}^{2}$ | 4. <br> Area a: $\qquad$ $\mathrm{cm}^{2}$ <br> Area b: $\qquad$ $\mathrm{cm}^{2}$ <br> Total: $\qquad$ $\mathrm{cm}^{2}$ |

Identify the shapes where the area can be calculated. Calculate the area of each compound shape.


