

**Year 4-Year 5
Summer Transition
Activity Booklet
Mathematics**



**Lake Farm Park
Academy**

Name:

Instruction

The aim of this activity booklet is to develop key areas of Mathematics (particularly mental arithmetic) to support knowledge and confidence in preparation for Year 5. Each week there will be the following:

1/ A mental warm up – This will be timed (you have 10 minutes) – You are given a start number and you may complete any question you like in any order. How many can you do? The aim is to increase your speed and accuracy over the weeks ahead.

2/ Did you know? – This section looks at some of the vocabulary and knowledge you will need to complete the weekly focus.

3/ Misconceptions – This section contains questions to explore some of the big misconceptions in this topic. Can you avoid some of the big errors made?

4/ Try this! – This contains 5 questions for you to try in your focus for the week and explain how you did them.

5/ What did you learn? – Write down what you remembered and helpful tips to remember important information you will need in Year 5.

6/ I'm still not sure about.... – In this section, note anything you are still not sure in this topic. This can be reviewed in your first week back in Year 5.

Remember to bring your completed pack with you on your first day in Year 5!

Timetable

Week	Mathematics Focus
1	Multiplication and Division
2	Addition and Subtraction
3	Fractions and Decimals
4	Rounding including decimals
5	Converting measurements
6	Area and Perimeter

Week 1 – Multiplication and Division

1/ Mental warm up: Your number is 145

Round to the nearest 10	Add 1000
Add 100	Multiply by 5
Multiply by 100	Divide by 10
Double the amount	Divide by 100
Check – Is it odd or even?	List three of the factors of the number
Expand the number to demonstrate all its place value	Find $\frac{1}{4}$ of the number
Take the digit at the end and add it to the front – how much more/less is the number from the original now?	Share between 4 people
The number is $\frac{1}{4}$. What is the whole?	What do you need to add to the number to get 1000?

How many of all of these questions can you do 10 minutes? Set the timer.

2/Did you know?

<http://www.bbc.co.uk/bitesize/ks2/maths/number/multiplication/division/read/1/>

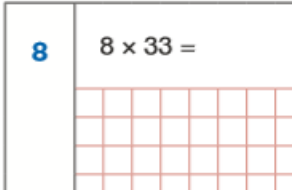
3/ Misconceptions

- If I know that $3 \times 4 = 12$, what other facts do I know / can I derive?
- The product is 40. What could the two numbers be? Convince me.
- Use the digits 4, 5 and 7 to generate TO x O calculations (each digit can only be used once for each calculation). What combination gives the largest / smallest product?

Convince me. How many different whole number answers are possible? Convince me that you have found them all.

- What clues do you look for when deciding if you can do a multiplication mentally? E.g. 36×4
- Give an example of how you could use partitioning to multiply a decimal by a two-digit whole number, e.g. 53×23 .

4/ Try this!

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- $2105 \div 5 =$
- $5847 \div 6 =$

5/ What did you learn?

What did you learn?	Top Tips

6/ I'm still not sure about.....

Week 2 – Addition and Subtraction

1/ Mental warm up: Your number is 560

Round to the nearest 10	Add 1000
Add 100	Multiply by 5
Multiply by 100	Divide by 10
Double the amount	Divide by 100
Check – Is it odd or even?	List three of the factors of the number
Expand the number to demonstrate all its place value	Find $\frac{1}{4}$ of the number
Take the digit at the end and add it to the front – how much more/less is the number from the original now?	Share between 4 people
The number is $\frac{1}{4}$. What is the whole?	What do you need to add to the number to get 1000?

How many of all of these questions can you do 10 minutes? Set the timer.

2/Did you know?

<https://www.bbc.com/bitesize/articles/zyhdfcw>

3/ Misconceptions

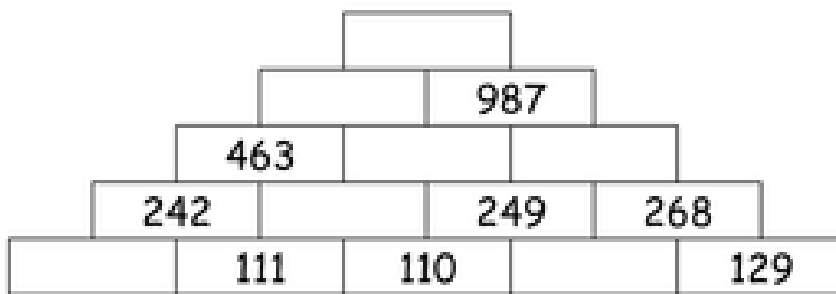
- Jack said,
'odd numbers + odd numbers = even numbers'
Always, sometimes or never true? Explain your answer
- What strategies can you use if you can't 'borrow' from another column in subtraction?

$$\begin{array}{r} 7001 \\ -369 \\ \hline \end{array}$$

- $23.4 + 6.93 =$
Show your working.

4/ Try this!

Fill in the missing bricks. Each brick is the sum of the two numbers below.



5 $1,025 + 655 =$

$$\begin{array}{r} 7) \quad 749 \\ - \quad 316 \\ \hline \end{array}$$

- Use the digits 7, 3, 8 to make 2 numbers. Add them together and then find the difference.

5/ What did you learn?

What did you learn?	Top Tips

6/ I'm still not sure about.....

Week 3 – Fractions and Decimals

1/ Mental warm up: Your number is 10 025

Round to the nearest 10	Add 1000
Add 100	Multiply by 5
Multiply by 100	Divide by 10
Double the amount	Divide by 100
Check – Is it odd or even?	List three of the factors of the number
Expand the number to demonstrate all its place value	Find $\frac{1}{4}$ of the number
Take the digit at the end and add it to the front – how much more/less is the number from the original now?	Share between 4 people
The number is $\frac{1}{4}$. What is the whole?	What do you need to add to the number to get 1000?

How many of all of these questions can you do 10 minutes? Set the timer.

2/Did you know?

Vocabulary:

Proper fractions,
Improper fractions,
Numerator
Denominator
Half
Quarter
Fifth
Tenths
Two fifths
Three tenths
Decimal

http://www.bbc.co.uk/bitesize/ks2/maths/number/fractions_basic/read/1/

http://www.bbc.co.uk/bitesize/ks2/maths/number/ordering_comparing_fractions/read/1/

3/ Misconceptions

- Jack said, 'The larger the denominator, the larger the fraction.' Why is Jack incorrect? Explain your answer.
- What is the same/different: $\frac{1}{2}$ and $\frac{5}{10}$
- Convince me that
 - a half is bigger than a quarter
 - a half is the same as two quarters
- Give me two equivalent fractions. How do you know they are equivalent?

4/ Try this!

- **Which is Larger?**

You can also Use the Fraction Number Line to find which fractions are smaller or larger (*smaller ones are closer to zero*).

Which fraction is larger in each of these pairs?

$$\frac{2}{7} \text{ or } \frac{1}{3} ?$$

$$\frac{1}{2} \text{ or } \frac{5}{9} ?$$

$$\frac{6}{7} \text{ or } \frac{4}{5} ?$$

$$\frac{1}{5} \text{ or } \frac{1}{7} ?$$

$$\frac{3}{4} \text{ or } \frac{5}{6} ?$$

$$\frac{6}{11} \text{ or } \frac{7}{15} ?$$

- Look at the fractions in the table to the right.

Pick 4 and order them in ascending order.

$\frac{1}{2}$	$\frac{5}{10}$	$\frac{4}{8}$
$\frac{2}{2}$	$\frac{9}{12}$	$\frac{3}{5}$
$\frac{7}{8}$	$\frac{6}{12}$	$\frac{1}{5}$

- Look at the fractions table. Pick two fractions that are closest to one whole. Explain your answer.
- Think of a fraction that is more than $\frac{3}{5}$ but less than $\frac{9}{10}$. Explain your answer.
- Order $\frac{9}{12}$, $\frac{1}{4}$, $\frac{1}{2}$ and $\frac{2}{3}$ in descending order.

5/ What did you learn?

What did you learn?	Top Tips

6/ I'm still not sure about.....

Week 4 – Rounding including decimals

1/ Mental warm up: Your number is 6791

Round to the nearest 10	Add 1000
Add 100	Multiply by 5
Multiply by 100	Divide by 10
Double the amount	Divide by 100
Check – Is it odd or even?	List three of the factors of the number
Expand the number to demonstrate all its place value	Find $\frac{1}{4}$ of the number
Take the digit at the end and add it to the front – how much more/less is the number from the original now?	Share between 4 people
The number is $\frac{1}{4}$. What is the whole?	What do you need to add to the number to get 1000?

How many of all of these questions can you do 10 minutes? Set the timer.

2/Did you know?

<https://www.youtube.com/watch?v=pNfz-JU2cKE>

<https://www.mathsisfun.com/rounding-numbers.html>

3/ Misconceptions

- When you are rounding to 10, which place value do you look at?
- What numbers round up? What numbers round down?
- 29.9 – round to the nearest whole number. What does 29 become?
- Estimate the answer $569 + 301$. (Use rounding to do this).

4/ Try this!

Using these 4 digits:



Use these digits to make a number that rounds to 170.

Use these digits to make a number that rounds to 7000.

Use these digits to make a number that rounds to 200.

- Use rounding to estimate the answers to these:
 $5903 - 1840$ $6202 + 898$ 199×4

• 5/ What did you learn?

What did you learn?	Top Tips

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6/ I'm still not sure about.....

Week 5 – Converting measurements

1/ Mental warm up: Your number is 96

Round to the nearest 10	Add 1000
Add 100	Multiply by 5
Multiply by 100	Divide by 10
Double the amount	Divide by 100
Check – Is it odd or even?	List three of the factors of the number
Expand the number to demonstrate all its place value	Find $\frac{1}{4}$ of the number
Take the digit at the end and add it to the front – how much more/less is the number from the original now?	Share between 4 people
The number is $\frac{1}{4}$. What is the whole?	What do you need to add to the number to get 1000?

How many of all of these questions can you do 10 minutes? Set the timer.

2/Did you know?

Vocabulary

<https://www.bbc.com/bitesize/topics/zcpnb9q>

3/ Misconceptions

- $1\text{m} = 100\text{cm}$, $1\text{cm} = 10\text{mm}$
- $1\text{kg} = 1000\text{g}$
- $1\text{l} = 1000\text{ml}$
- Time not base 10: $1\text{ hour} = 60\text{ minutes}$, $1\text{ minute} = 60\text{ seconds}$

4/ Try this!

An empty box weighs 0.5 kg. Ivy puts 10 toy bricks inside it and the box now weighs 2 kg.

How much does each brick weigh?

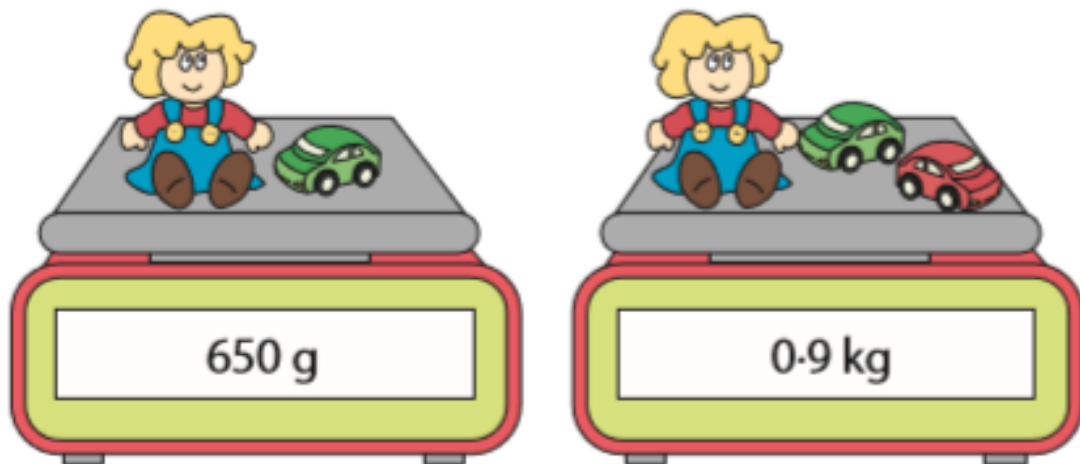
Put these amounts in order starting with the largest.

- Half of 3 litres
- Quarter of 2 litres
- 300 ml

Explain your thinking.

How much does the car weigh in grams?

How much does the doll weigh in grams?



Fill in the missing boxes so that the amounts are in order from smallest to greatest.

$\frac{1}{2}$ a litre	<input type="text"/> millilitres	$\frac{1}{3}$ of 2 litres	<input type="text"/> millilitres	$\frac{1}{4}$ of 3 litres
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- 5/ What did you learn?

What did you learn?	Top Tips

- 6/ I'm still not sure about.....

Week 6 – Area and Perimeter

1/ Mental warm up: Your number is 104

Round to the nearest 10	Add 1000
Add 100	Multiply by 5
Multiply by 100	Divide by 10
Double the amount	Divide by 100
Check – Is it odd or even?	List three of the factors of the number
Expand the number to demonstrate all its place value	Find $\frac{1}{4}$ of the number
Take the digit at the end and add it to the front – how much more/less is the number from the original now?	Share between 4 people
The number is $\frac{1}{4}$. What is the whole?	What do you need to add to the number to get 1000?

How many of all of these questions can you do 10 minutes? Set the timer.

2/Did you know?

Vocabulary

Area is the space that a shape takes up. It is recorded in units²

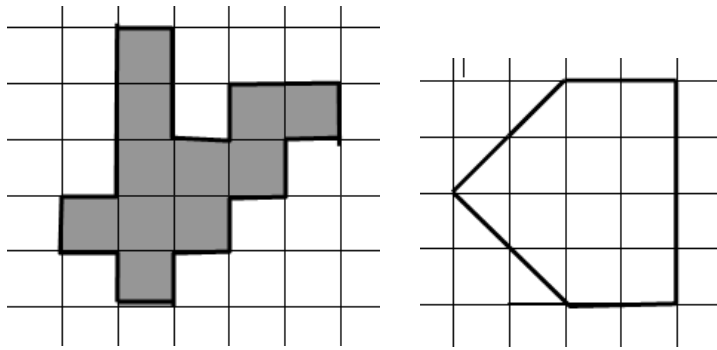
Perimeter is the total length of a shape.

3/ Misconceptions

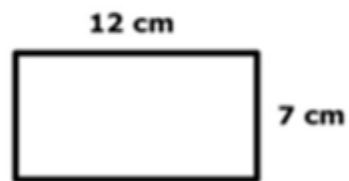
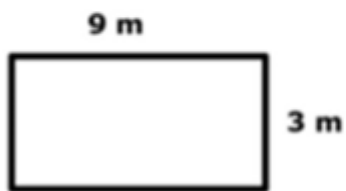
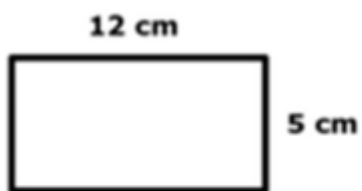
- You need to add the lengths of every side together to find the perimeter.
- Shape knowledge is crucial to work out missing lengths with an area and perimeter.
- The area of a rectangle and square is length x height
- The area of a triangle is length x height \div 2

4/ Try this!

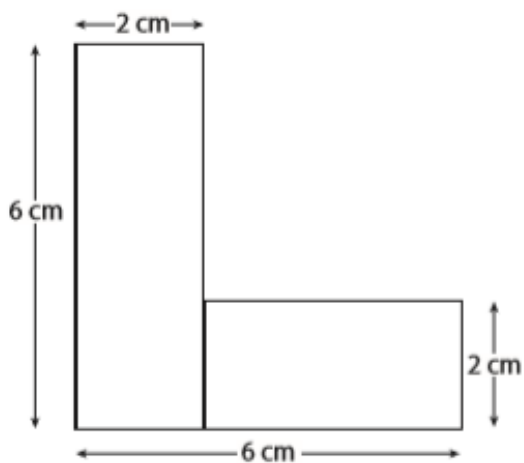
Find the area of these shapes:



Find the perimeter of these rectangles:



The shape below is made from two rectangles.
Identify the perimeter of each of the two rectangles.
How many 1 cm squares would fit into the smaller rectangle?
How many more squares fit into the larger rectangle?



5/ What did you learn?

What did you learn?	Top Tips

6/ I'm still not sure about.....