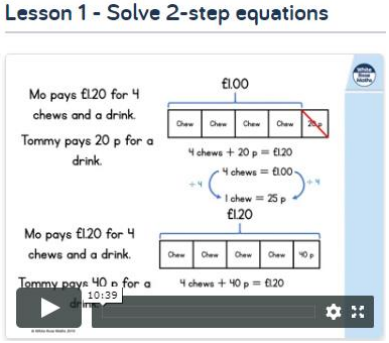
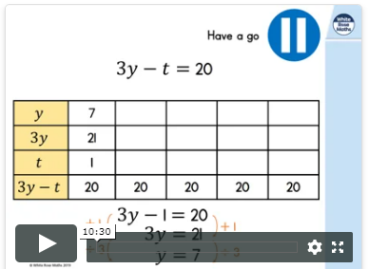
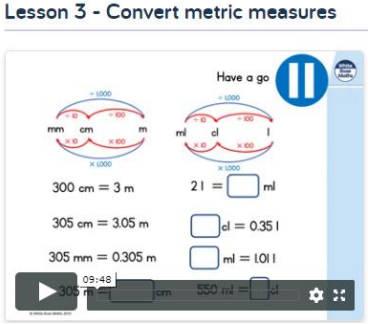
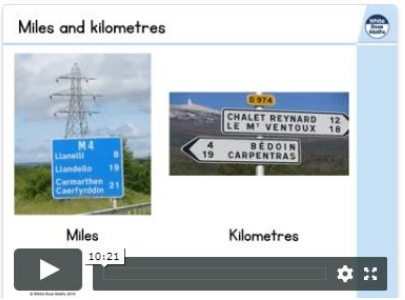
Maths Planning and Ideas

Week Commencing: 22.06.20

Year Group: Year 6

This week, we are going to be revisiting some of the key learning that the children will need as they prepare for their next year of schooling. This may mean that they are consolidating learning that they already understand or are perhaps having another go at some of the trickier topics. The subject areas may also jump around a little but this sequence of lessons has been put together in order to support our oldest children as much as possible before they head to secondary school.

	Monday	Tuesday	Wednesday	Thursday	Friday
Area of Learning	**Arithmetic** LC: Can you review your arithmetic understanding?	LC: Can you solve more complex 2-step equations?	LC: Can you find pairs of values?	LC: Can you convert metric measures?	LC: Can you convert between miles and kilometres?
		For these lessons, we will be using the Home Learning Section of the White Rose Maths Scheme and website: https://whiterosemaths.com/homelearning/year-6/ *Each day there will be a short video to watch and activities to complete, which will be provided below. The dates of these lessons may not match the date that chn are completing the work so please check to make sure that you have selected the correct lesson, shown in* ***green*** *on this plan.* **Please note that for this week, activities will be from the wb 15.06.20 on the White Rose website, as we are revisiting some key areas of learning.** *Any problems, just let Mrs Shepherd know!*			
Activity	Starter: Complete the 10 mental maths questions for Monday (provided below)	Starter: Complete the 10 mental maths questions for Tuesday (provided below) **Main Activity**	Starter: Complete the 10 mental maths questions for Wednesday (provided below) **Main Activity**	Starter: Complete the 10 mental maths questions for Thursday (provided below) **Main Activity**	Starter: Complete the 10 mental maths questions for Friday (provided below) **Main Activity**

	Main Activity CHALLENGE YOURSELF YEAR 6! As you heard in Miss Bowden's message last week, the teachers enjoy a quiz every Saturday – we are competing against each other, but also ourselves. When we do well, we reward ourselves with something we like doing. This could be a bite of a chocolate bar or 10 extra minutes of our favourite TV. This week, I want you to challenge yourselves and reward all of your hard work. Compare your score from last week – if you beat this, reward yourself with something that you like doing! **Independent Activity** Complete the arithmetic test linked below: https://myminimaths.co.uk/year-6-	Watch the video for **Summer Term Week 8 (wb 15.06.20) – Lesson 1** to continue your work on multiple-step equations:  **Independent Activity** Today's work follows on directly from last week and our sessions on algebra and equations. If you are unsure, maybe revisit your previous work to help you, particularly the work on one-step equations. Much of the lesson follows a similar pattern, but this time there are two parts/jobs to be done in order to complete the question. The hardest part is often identifying each step. Read the questions carefully to make sure you know what to do first before completing the second part.	Watch the video for **Summer Term Week 8 (wb 15.06.20) – Lesson 2** to show you how to use more than one letter within algebraic expressions:  **Independent Activity** Hopefully by now, you are confident with using letters to represent hidden numbers in equations. So far, we have used one letter per equation, now we will add another. Sometimes, when you are trying to calculate the value of a letter, you might need to try a few options – trial and error can be a useful way to solve problems, but think carefully about whether or not it is the most efficient way to complete the question. Have a go at the questions below – some will be harder than others.	Watch the video for **Summer Term Week 8 (wb 15.06.20) – Lesson 3** to recap our previous work on converting between units of measure:  **Independent Activity** Whether it be in our mental maths or in the virtual classroom, we have done quite a bit of work on units of measure. Remember, your work from 2 weeks ago focused on multiplying and dividing by 10/100/1000 – these skills will be vital now so look back for help if you need it. Have a go at the questions below – some will be harder than others.	Watch the video for **Summer Term Week 8 (wb 15.06.20) – Lesson 4** to find out about the link between kilometres and miles:  **Independent Activity** This conversion work isn't quite as simple as yesterday's, but the process is much the same. This may be a new piece of information for some of you but it is a key conversion that will remain useful throughout your school life and beyond. Have a go at the questions below – some will be harder than others.

	arithmetic-practice-papers/ Please complete **Paper 6**. You should aim to give yourself between 35-40mins to complete the paper. The answers are also provided so that you can mark your work…but no sneak peaks beforehand please! ☺	Have a go at the questions below – some will be harder than others.			

Starter Activities

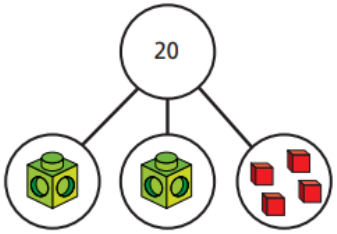
Monday		Tuesday		Wednesday		Thursday		Friday	
1.	7 x 4 x 6	11.	8 x 2 x 9	21.	6 x 7 x 3	31.	5 x 5 x 2	41.	11 x 3 x 4
2.	13 x ? = 91	12.	27 x ? = 135	22.	48 x ? = 384	32.	76 x ? = 304	42.	35 x ? = 175
3.	6.69 x 100	13.	4.8 x 10	23.	8.7 x 1000	33.	16.2 x 10	43.	0.3 x 100
4.	Which is bigger - 0.204 or 24%?	14.	Which is bigger - 5% or 0.5?	24.	Which is bigger - 39% or 0.309?	34.	Which is bigger - 0.82 or 8.2%?	44.	Which is bigger - 95% or 0.095?
5.	Write 22/100 as a decimal	15.	Write 56/100 as a decimal	25.	Write 75/100 as a decimal	35.	Write 8/100 as a decimal	45.	Write 6/100 as a decimal
6.	Write 0.29 as a fraction	16.	Write 0.01 as a fraction	26.	Write 0.17 as a fraction	36.	Write 0.75 as a fraction	46.	Write 0.517 as a fraction
7.	£4.66+ 24p	17.	£7.79 + 16p	27.	£35.04 + 62p	37.	£0.52 + 398p	47.	£0.50 + 556p
8.	8°C colder than 3°C	18.	12°C colder than 2°C	28.	7°C colder than –3°C	38.	5°C colder than –2°C	48.	6°C colder than –15°C
9.	Difference between 65 and 21	19.	Difference between 104 and 16	29.	Difference between 370 and 149	39.	Difference between 973 and 699	49.	Difference between 820 and 534
10.	1600 ÷ 400	20.	2400 ÷ 400	30.	2000 ÷ 400	40.	2800 ÷ 400	50.	3600÷ 400

If you cannot print off these questions, please don't worry – simply have a go at writing the calculations and answers in your book or on a piece of paper!

Monday 22.06.20 **Arithmetic Paper available to download using link provided**

Tuesday 23.06.20

1 Here is a part-whole model.

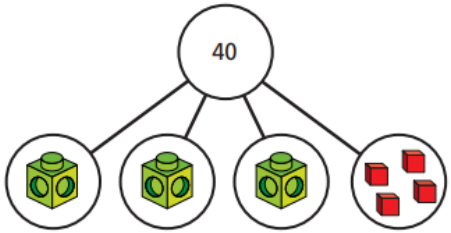


a) Write an equation for the part-whole model.

b) Solve the equation to work out the value of 

 = ☐

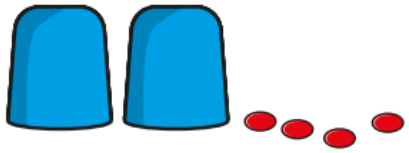
2 If each multilink cube represents x, form and solve an equation to find the value x.



x = ☐

3 There is the same number of counters under each cup.

There are 16 counters in total.



a) Use y to represent the number of counters under each cup.

Write an equation in terms of y.

b) Solve the equation to find the value of y.

y = ☐

c) How many counters are under each cup? ☐

4 Write an algebraic equation to represent each bar model.

Find the values of a and b.

a)

21		
a	a	9

a = ☐

b)

46	
$3b$	10

b = ☐

5 Solve the equations.

a) $5x + 1 = 31$

$x =$ ☐

b) $3x - 3 = 9$

$x =$ ☐

c) $4p - 11 = 3$

$p =$ ☐

d) $9 = 2y + 8$

$y =$ ☐

e) $10g - 2 = 46$

$g =$ ☐

f) $4 + 3y = 28$

$y =$ ☐

6 Dani thinks of a number.

She doubles it and adds 3

She gets the answer 15

a) Write an equation to represent Dani's problem.

_____

b) Solve the equation to find her number.

7 Alex is y years old.

Her friend Brett is 3 years older.

The total of their ages is 25

How old are Alex and Brett?

Alex is ☐ Brett is ☐

8

a) Work out the cost of one banana and one orange.

One banana costs ☐ One orange costs ☐

Wednesday 24.06.20

1 Class 6 are trying to solve a number puzzle.

▲ + ▲ + ● = 10

a)

The triangle could be 3 and the circle could be 4

Dexter

Do you agree with Dexter? _____

Explain why.

_____

_____

b)

The triangle is worth 4

Dora

What is the value of the circle in Dora's number puzzle?

● = ☐

c) Find other pairs of values that the triangle and circle could equal.

Find three pairs.

▲ = ☐ ● = ☐ ▲ = ☐ ● = ☐

▲ = ☐ ● = ☐

2 a and b are whole numbers.

$2a + b = 14$

Complete the table to show different possible values for a and b.

a	0	1	2	3	4	5	6	7
$2a$	0	2						
b	14							
$2a + b$	14	14	14	14				

3 c and d are both integers less than 15 but greater than zero.

$3c - d = 2$

Complete the table to show different possible values for c and d.

c	1	2	3	4	5
$3c$	3				
d	1				
$3c - d$	2	2	2		

b) Explain why there are no other possible values for c and d.

_____

4 x and y are both multiples of 5 less than 100

If $2x = y$, circle the possible values of x and y.

$x = 20, y = 20$

$x = 10, y = 20$

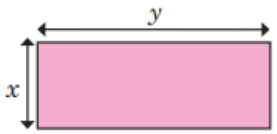
$x = 20, y = 10$

$x = 35, y = 70$

$y = 90, x = 45$

5 Here is a rectangle.

x and y are both integers.



The rectangle has a perimeter of 28 cm.

a) Write an equation to represent the perimeter of the rectangle.

b) List all the possible pairs of values for x and y.

7 Ron has four digit cards.

- Two of the cards have the same value.
- All of the cards are less than 10 but greater than zero.
- All of the cards are odd.
- The sum of the four cards is 24

Find two possible sets of cards.

Set 1 ☐ ☐ ☐ ☐

Set 2 ☐ ☐ ☐ ☐

8

$2ab = 48$

a) Find a pair of possible values for a and b.

$a =$ ☐ $b =$ ☐

Thursday 25.06.20

2 Complete the sentences.

a) There are ☐ grams in 1 kilogram.

There are ☐ kilograms in one tonne.

b) There are ☐ millilitres in 1 litre.

c) There are ☐ millimetres in 1 centimetre

There are ☐ centimetres in 1 metre.

There are ☐ metres in 1 kilometre.

3 Complete the bar models.

a)

1 km	1 km	1 km	1 km
1,000 m	1,000 m		

There are ☐ m in 4 km.

b)

1 kg	1 kg	1 kg	1 kg	1 kg	1 kg	$\frac{1}{2}$ kg
1,000 g	1,000 g	1,000 g				

There are ☐ g in $6\frac{1}{2}$ kg.

4 Complete the conversions.

a) 2 kg = ☐ g

5 kg = ☐ g

10 kg = ☐ g

12kg = ☐ g

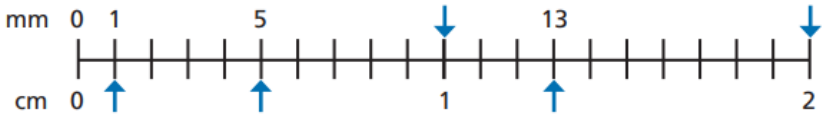
b) 1 l = ☐ ml

5 l = ☐ ml

11 l = ☐ ml

6 What measurements are the arrows pointing to?

Label them on the number line.



7 Complete the conversions.

a) 10 mm = ☐ cm ☐ mm = 1.1 cm

11 mm = ☐ cm ☐ mm = 10.1 cm

☐ mm = 11 cm

b) 2.1 km = ☐ m 2.01 km = ☐ m

2.001 km = ☐ m 2.011 km = ☐ m

8 Write > , < or = to complete the statements.

a) 100 m ◯ 1 km **b)** 5.1 l ◯ 5,100 ml

10 m ◯ 10 cm 607 l ◯ 0.607 ml

10.1 mm ◯ 101 cm 0.05 l ◯ 5 ml

9 Dora and Amir are trying to convert 1.05 metres into millimetres.

Dora

You can multiply 1.05 by 100 to convert it into centimetres, then multiply the product by 10 to convert it into millimetres.

Amir

You can just multiply 1.05 by 1,000!

Who do you agree with? _____

Explain your thinking.

10 What is the mass of one of the boxes?

Give your answer in grams.

☐

11 There are 1,000 kg in one tonne.

a) How many grams are there in one tonne?

☐

b) A car weighs 1.3 tonnes.

Write the weight of the car in grams.

☐

Friday 26.06.20

1 Tick the statements that are true.

Use the bar model to help you.

1 mile	1 mile	1 mile	1 mile	1 mile

1 km	1 km	1 km	1 km	1 km	1 km	1 km	1 km

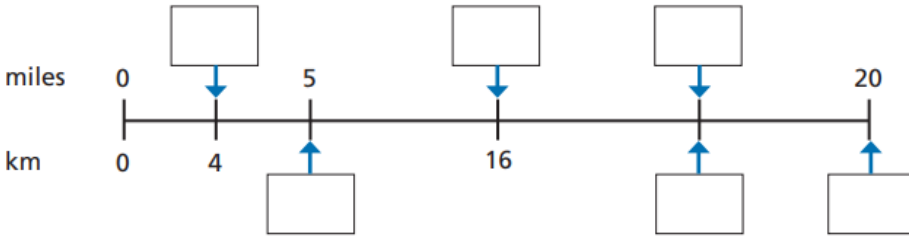
a) 5 miles is approximately equal to 8 kilometres. ☐

b) 1 mile is longer than 1 kilometre. ☐

c) 2 kilometres is longer than 1 mile. ☐

d) 2 kilometres is longer than 2 miles. ☐

2 Fill in the missing numbers on the number line.



3 Complete the conversions.

a) 5 miles ≈ ☐ kilometres

10 miles ≈ ☐ kilometres

15 miles ≈ ☐ kilometres

b) ☐ miles ≈ 16 kilometres

☐ mile ≈ 1.6 kilometres

☐ miles ≈ 0.8 kilometres

4 Complete the conversions.

a) ☐ miles ≈ 160 km

b) 45 miles ≈ ☐ km

c) ☐ ≈ 640 km

d) 95 miles ≈ ☐ km

e) 7.5 miles ≈ ☐ km

f) 2 miles ≈ ☐ km

5

If 5 miles is approximately 8 kilometres, then 10 miles is approximately 13 kilometres.

Here is Whitney's working out.

+ 5 ↷ 5 miles ≈ 8 km
10 miles ≈ 13 km ↷ + 5

Explain Whitney's mistake.

6 A marathon is approximately 26.2 miles.

How far is this in kilometres?

7 The maximum speed limit on residential roads in the UK is 30 miles per hour.

In France, the maximum speed limit on residential roads is 50 kilometres per hour.

a) Which country has the higher speed limit for these roads?

b) What is the difference between the speed limits in miles per hour?

8 Esther cycles 70 miles over 4 days.

On day 1 she cycles 14 miles.

On day 2 she cycles 32 km.

On day 4 she cycles twice as far as she does on day 3

How far does she cycle on day 4?

Give units with your answer.

9 Use a map of your local area.

Find something that is approximately:

a) 1 mile away from your school

b) 1 km away from your school

c) 5 miles away from your school

d) 5 km away from your school

Where can I complete further work?

Twinkl – Subscription service used by schools is offering a free premium service for teachers, parents and children to use whilst schools are closed. Enter the code **UKTWINKLHELPS** for access to worksheets, powerpoints and interactive games to support all areas of learning.

Classroom Secrets – Free Maths, Reading and Grammar home learning packs and interactive resources for all ages.

White Rose Maths – Free Maths home learning resources for all ages. Watch the videos and try the questions.

Primary Stars – Free Maths home learning packs for Year 1 and 2.

BBC Bitesize Primary – Free learning resources available for KS1 and KS2 across all subjects.

I See Maths – Free daily home maths lessons hosted by Gareth Metcalfe. Follow the link for videos, information and resources.

Top Marks – Free educational resources and games for English and Maths.

ICT Games – Free educational resources and games for English and Maths.