



W.C. 27th April 2020

<https://www.bbc.co.uk/bitesize/tags/zhgppg8/year-5-lessons/1>

Maths

Use this worksheets to work from and not on. All you need is a piece of paper, pencil and maybe a ruler.

After watching the videos and having a go at the practise activities, have a go at these activities. Depending on your confidence choose Mild, Medium or Spicy.

Extensions – You may wish to deepen your learning by looking at the Collins Worksheets provided by the BBC too.



Monday

<https://www.bbc.co.uk/bitesize/articles/zvv6t39>

Prime Numbers and Square Numbers

Prime numbers are numbers that are only divisible by themselves and by 1.

Square Numbers

When a number has been multiplied by itself, we say that the answer is a square number.

$$1 \times 1 = 1$$

1

$$2 \times 2 = 4$$

1	2
3	4

$$3 \times 3 = 9$$

1	2	3
4	5	6
7	8	9

We can write three squared as 3×3 or 3^2

Mild

Prime Numbers

Complete the table.

Number	Factors	Is the number prime?
5	1 and 5	Yes
9		
11		
14		
15		
19		

Here are sequences of consecutive prime numbers.

Complete the sequences.

a) 7, 11, 13, , 19

b) 37, 31, 29, , 19

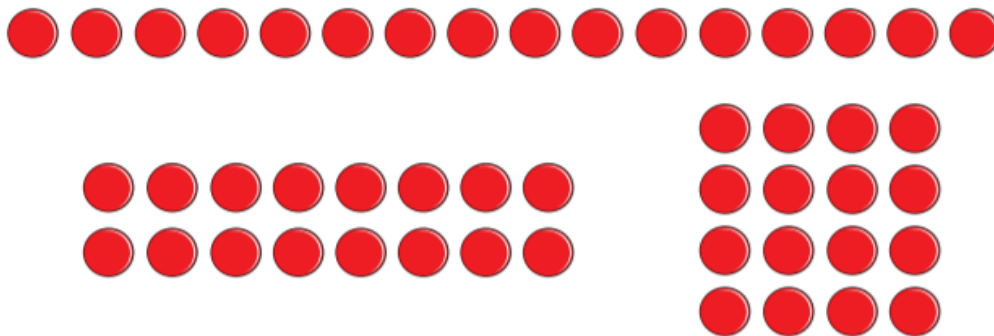
A prime number has two factors: 1 and itself.

List the prime numbers up to 20

Square Numbers

Draw the counters onto your sheet of paper

a) Use 16 counters to make these arrays.



b) What do you notice about the shape of one of the arrays?

c) Is 16 a square number? How do you know?

Which of these numbers are square numbers?

Circle your answers.

4 10 18 25

Medium

Prime Numbers

Just list the numbers (rather than colour)

Colour all the prime numbers.

51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80

Here are some numbers.

126	175	2,378	777	381	9,000
-----	-----	-------	-----	-----	-------



Jack

The numbers are big. It's hard to check if they are prime.

I can tell quickly that none of these numbers are prime.



Annie

How does Annie know that none of the numbers are prime?

Square Numbers

a) Is it possible to make a square array with 8 counters? _____

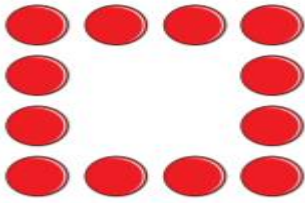
b) Is it possible to make a square array with 9 counters? _____

c) Which number is a square number?



How do you know?

Dexter makes a square using 12 counters.



12 is a square number as I can make the counters into a square.



What mistake has Dexter made?

Spicy

Prime Numbers

Can you write out all the prime numbers from 1-100? Remember the rule above

Mo and Alex are talking about prime numbers.



Mo

Prime numbers are always odd.

I think prime numbers can be even.



Alex

Who is correct? _____

How do you know?

The arrays below show a sequence.

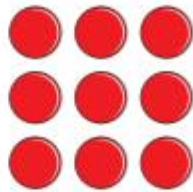
a) Complete the number sentences. Use the arrays to help you.



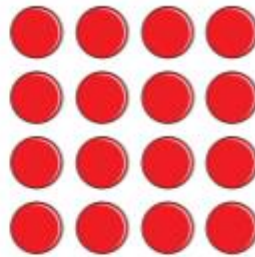
$1 = \square$



$2 \times 2 = \square$



$3 \times \square = \square$



$\square \times \square = \square$

b) What do these numbers have in common?

c) Draw the next two numbers in the sequence and write a number sentence for each.

Huan is celebrating his birthday.

His age is a square number.

Last year he was a multiple of 12

Next year he will be a multiple of 10

How old is Huan?

Tuesday

Multiply and divide by 10, 100 and 1,000

10 000	1000	100	10	1	●	$\frac{1}{10}$	$\frac{1}{100}$	$\frac{1}{1000}$
					●			

Multiplying

X 10
X 100
X 1000

digits move LEFT 1 space
digits move LEFT 2 spaces
digits move LEFT 3 spaces



Dividing

÷ 10
÷ 100
÷ 1000

digits move RIGHT 1 space
digits move RIGHT 2 spaces
digits move RIGHT 3 spaces



Mild

Complete the multiplications.

a)

Th	H	T	O
			7

$$7 \times 10 = \boxed{}$$

b)

Th	H	T	O
		3	9

$$39 \times 10 = \boxed{}$$

c)

Th	H	T	O
	2	0	5

$$205 \times 10 = \boxed{}$$

d) What happens to the digits when you multiply by 10?

a)

HTh	TTh	Th	H	T	O
			9	0	0

$$900 \div 100 = \boxed{}$$

b)

HTh	TTh	Th	H	T	O
	1	6	0	0	0

$$16,000 \div 100 = \boxed{}$$

c)

HTh	TTh	Th	H	T	O
		9	0	0	0

$$9,000 \div 1,000 = \boxed{}$$

d)

HTh	TTh	Th	H	T	O
7	6	8	0	0	0

$$768,000 \div 1,000 = \boxed{}$$

Explain to a partner how to divide a number by 100

Ask them to explain to you how to divide a number by 1,000

How about you explain this to someone at home to check your understanding -

TEACH them! ☺

Complete the division sentences.

a)

Th	H	T	O
		6	0

$$60 \div 10 = \boxed{}$$

b)

Th	H	T	O
	4	9	0

$$490 \div 10 = \boxed{}$$

c)

Th	H	T	O
1	4	9	0

$$1,490 \div 10 = \boxed{}$$

d) What happens to the digits when you divide a number by 10?

Complete the divisions.

a)

HTh	TTh	Th	H	T	O
			9	0	0

$$900 \div 100 = \boxed{}$$

b)

HTh	TTh	Th	H	T	O
	1	6	0	0	0

$$16,000 \div 100 = \boxed{}$$

c)

HTh	TTh	Th	H	T	O
		9	0	0	0

$$9,000 \div 1,000 = \boxed{}$$

d)

HTh	TTh	Th	H	T	O
7	6	8	0	0	0

$$768,000 \div 1,000 = \boxed{}$$

Medium

Complete the multiplication sentences.

a) $9 \times 10 = \boxed{}$

e) $\boxed{} \times 10 = 320$

b) $54 \times 10 = \boxed{}$

f) $10 \times \boxed{} = 1,350$

c) $10 \times 13 = \boxed{}$

g) $20 \times 10 = \boxed{}$

d) $126 \times 10 = \boxed{}$

h) $\boxed{} \times 10 = 5,000$

4

Complete the multiplication sentences.

a) $45 \times 100 =$

$52 \times 100 =$

$70 \times 100 =$

b) $612 \times 100 =$

$715 \times 100 =$

$720 \times 100 =$

c) $41 \times 10 =$

$41 \times 100 =$

$41 \times 1,000 =$

d) $10 \times 952 =$

$100 \times 952 =$

$1,000 \times 952 =$

Complete the division sentences.

a) $4,500 \div 10 =$

$62,000 \div 10 =$

$739,300 \div 10 =$

b) $4,500 \div 100 =$

$62,000 \div 100 =$

$739,300 \div 100 =$

c) $\div 10 = 76$

$\div 100 = 76$

$\div 1,000 = 76$

d) $\div 1,000 = 30$

$\div 1,000 = 300$

$\div 1,000 = 3,000$

Spicy

Complete the multiplication sentences.

a) $52 \times$ $= 5,200$

b) $95 \times$ $= 950$

c) $136 \times$ $= 1,360$

d) $272 \times$ $= 272,000$

e) $6,200 =$ $\times 62$

f) $\times 370 = 3,700$

g) $\times 100 = 8,200$

h) $\times 100 = 82,000$

i) $\times 10 = 39,000$

j) $1,000 \times$ $= 80,000$

Mrs Hall owns a bookshop.

- In January, she sold 145 books.
- In February she sold 10 times as many books.
- In March she sold 10 times as many books as in February.

How many books did Mrs Hall sell in March?

Show your workings.

In 2019, 568,000 houses were built.

In 2018, 10 times fewer houses were built.

In 2017, 100 times fewer houses were built.

a) How many houses were built in 2018?

 houses

b) How many houses were built in 2017?

 houses

c) How many houses were built between 2017 and 2019?

 houses

Wednesday

Short and long multiplication

Watch these clips for extra support

https://www.youtube.com/watch?v=gC76ahwXi_8 Long Multiplication

<https://www.youtube.com/watch?v=ryB0ruIdPlc> Short Multiplication

Mild, Medium and Spicy - Log on to Timetable Rockstars and compete in the Battles we have set up!



Then have a go at completing the Collins Activities provided on BBC Bitesize today. Do not worry if you find these methods a challenge, we have only recently recapped and learnt these methods ☺

Thursday

Short Division (Bus Stop Method)

$$186 \div 6 =$$

	0	3	1
6	┌──────────┐		
	1	¹ 8	6

no groups of 6
can be made

$1 \times 6 = 6$

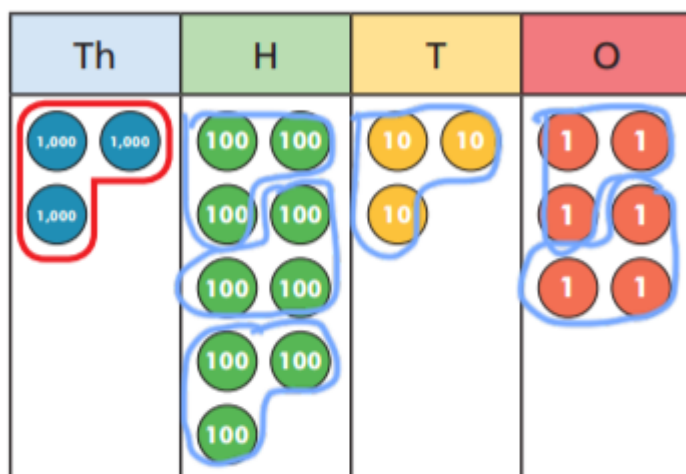
$3 \times 6 = 18$

Here is an example of how we have used the counters in previous lessons to represent the division calculation.

Use this to help you by drawing counters and place value charts should you need to.

Circle the groups of 3 to help you complete the sentences and calculation.

The first step has been done for you.



		1	3	1	2
	3	3	9	3	6

There is group of 3 thousands.

There are groups of 3 hundreds.

There is group of 3 tens.

There are groups of 3 ones.

$$3,936 \div 3 = \text{1,312}$$

Mild

Use the place value chart to work out $8,404 \div 4$

Th	H	T	O

	4	8	4	0	4

$$8,404 \div 4 = \text{2,101}$$

$$5,296 \div 4 = \boxed{}$$

Th	H	T	O

	4	5	2	9	6	

$$6,078 \div 6 = \boxed{}$$

Th	H	T	O

	6	6	0	7	8	

Medium

Complete the divisions.

a)

	5	3	5	6	0	

d)

	6	9	7	8	6	

b)

	9	2	7	3	6	

e)

	3	4	6	8	3	

c)

	4	6	5	2	4	

f)

	1	2	0	7	9	

Could you have calculated the answer to part f) more efficiently?

Find the missing digits.

a)

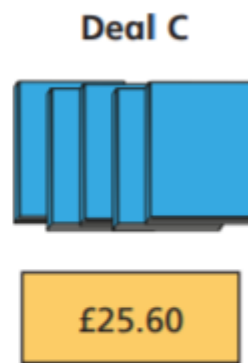
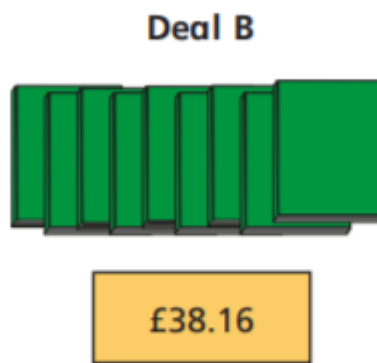
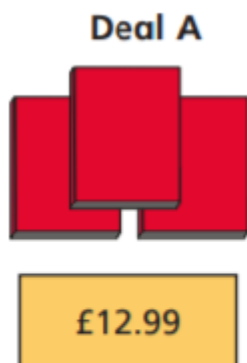
		2	2		1	
		8	9	6		

b)

		3		6		
		6	5		4	

Spicy

Books are available to buy in three different deals.



Which is the best deal?

Show your workings.

Multi-Step Division Word Problems Challenge Cards

5. A local charity has 3 fundraising events. The events raise £176, £81 and £309 each. After costs of £92 are deducted, the money is shared equally among 3 local children's group. How much does each group receive?



Friday

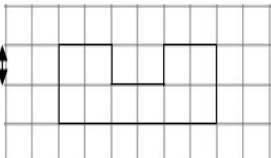
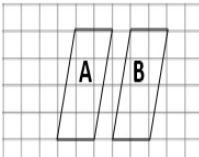
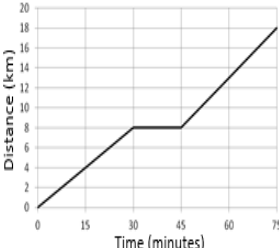
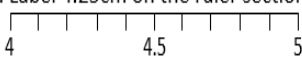
Today you may wish to challenge yourself with the online challenges or the Key Skills tasks! But make sure to have plenty of fun with maths today!

Key Skills and Rockstars

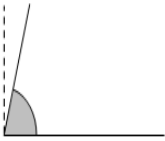
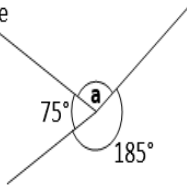
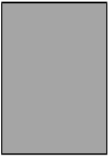
Remember these sheets are only to work from not on so don't worry if you cannot complete a couple of the questions.

Mild

(Do not worry about Q20 or 23 if you cannot print out the sheet)

A: Place Value, Add and Subtract		B: Multiply, Divide and Fractions		C: Measure, Geometry and Statistics	
1. What is the missing number? 18 24 30 42	4:1	11. $7 \times 11 =$	4:9	21. What is the area of this shape? 	4:20
2. What is the missing number? 7,000 8,000 9,000	4:1	12. Circle the sum that is the same as 27×12 : $3 \times 4 \times 9$ $3 \times 9 \times 12$	4:10		
3. Round this number to the nearest 100: 5,731	4:2	13. $293 \times 7 =$	4:11	22. Circle the name that describes the smallest angle. Right angle Obtuse angle Acute angle	4:24
4. What is 1,000 less than 3,293?	4:2	14. To work out 53×8 you could do: $\times 8 + 3 \times$	4:12		
5. What is 3 less than 1?	4:3	15. Circle the equivalent fraction to $\frac{1}{7}$. $\frac{3}{28}$ $\frac{5}{35}$ $\frac{7}{56}$	4:13	23. To transform shape A onto B: Translate A units to the . 	4:27
6. What is the value of the 2 in this number? 3,296	4:4	16. Complete the sequence: $\frac{22}{100}$ $\frac{23}{100}$ $\frac{24}{100}$	4:14		
7. Write the number 37 in Roman numerals.	4:5	17. $\frac{9}{5} + \frac{2}{5}$	4:15	24. Tom rode to his friend's house. 	4:29
8. $1,235 + 824 =$	4:6	18. Write 0.5 as a fraction.	4:16		
9. Write the sum to check $1,930 + 383 = 2,313$: 2,313 1,930 383	4:7	19. $8 \div 100 =$	4:17	Using the distance - time graph, how long did Tom rest for?	
10. There are 213 people on a train. 28 get on & 49 get off. How many now?	4:8	20. Label 4.25cm on the ruler section: 	4:18	25. How much further was the 2nd part of Tom's journey than the first?	4:30
Total (A)		Total (B)		Total (C)	

Medium and Spicy

A: Place Value, Add and Subtract		B: Multiply, Divide and Fractions		C: Geometry and Problem Solving	
1. Write < or > to make this correct: 129,389 295,837	5:1	11. Circle all the multiples of 9. 3 18 27 34	5:8	21. Which of these three numbers is the largest ? a. 0.4 b. 0.348 c. 0.54	5:18
2. Write 130,011 in words.	5:1	12. The number 20 has two prime factors . What are they?	5:9		
3. Round 163,824 to the nearest hundred .	5:2	13. $5,128 \div 4$	5:10	22. This net of a cube is missing a square. 	5:24
4. What is the missing number? 32,475 31,475 29,475	5:2	14. $2,050 \div 1000$	5:11	Add the <u>square</u> .	
5. Find the difference in temperatures. London -5°C Glasgow 4°C	5:3	15. Complete the sequence of square numbers . 1 4 16	5:12	23. Estimate the size of this angle: 	5:25
6. Write this number in Roman Numerals: 1,255	5:4	16. Write <, = or > to make this correct: $\frac{2}{3}$ $\frac{4}{6}$	5:13		
7. $10,750 + 2,925 =$	5:5	17. Find an equivalent fraction of $\frac{3}{5}$. 	5:14	24. Calculate the missing angle labelled a : 	5:26
8. $8,912 - 6,495 =$	5:5	18. Write $3\frac{3}{7}$ as an improper fraction .	5:15		
9. Complete this sum without written working. $9,500 + 8,500 =$	5:6	19. $2\frac{1}{3} \times 3 =$	5:16	25. The perimeter of <u>this square</u> is 44cm. 	5:27
10. A train has 327 seats. 238 seats are empty. How many are <u>on board</u> ?	5:7	20. Round 2.29 to the nearest whole number.	5:17	How long is each <u>side</u> ?	
Total (A)		Total (B)		Total (C)	