



Drake Class

Year 6 Maths Home Learning Activities

Week beginning Monday 29/06/20



Division

We have covered division before – earlier in the year – but, again, I thought that it would be useful to revisit some of the strategies we use to calculate answers.

Multiplication tables are extremely useful for division so keep practising them.

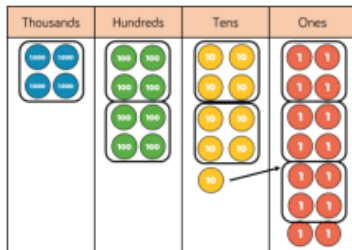
<https://www.topmarks.co.uk/maths-games/hit-the-button>

I will add a video talking through the steps of how to complete short/long division or, alternatively there is this one:

<https://www.khanacademy.org/math/arithmetic-home/multiply-divide/mult-digit-div-2/v/level-4-division>

Step 1: Short Division with remainders:

Here is a method to solve 4,894 divided by 4 using place value counters and short division.



	1	2	2	3	
4	4	8	9	4	r2

Always, Sometimes, Never?

A three-digit number made of consecutive descending digits divided by the next descending digit always has a remainder of 1

$$765 \div 4 = 191 \text{ remainder } 1$$

Use this method to calculate:

$$6,613 \div 5$$

$$2,471 \div 3$$

$$9,363 \div 4$$

How many possible examples can you find?

Muffins are packed in trays of 6 in a factory.

In one day, the factory makes 5,623 muffins.

How many trays do they need?

How many trays will be full?

Why are your answers different?

For the calculation $8,035 \div 4$

- Write a number story where you round the remainder up.
- Write a number story where you round the remainder down.
- Write a number story where you have to find the remainder.

Step 2: Long Division:

		0	3	6
1	2	4	3	2
	–	3	6	0
			7	2
	–		7	2
				0

Multiples of 12:

- $12 \times 1 = 12$
- $12 \times 2 = 24$
- $12 \times 3 = 36$
- $12 \times 4 = 48$
- $12 \times 5 = 60$
- $12 \times 6 = 72$
- $12 \times 7 = 84$
- $12 \times 8 = 96$
- $12 \times 9 = 108$
- $12 \times 10 = 120$

Use this method to calculate:

$$765 \div 17$$

$$450 \div 15$$

$$702 \div 18$$

		0	3	6
1	2	4	3	2
	–	3	6	
			7	2
	–		7	2
				0

Use the long division method to calculate:

$$836 \div 11$$

$$798 \div 14$$

$$608 \div 19$$

Step 3: Long Division:

Here is a division method.

	0	4	8	9	
15	7	3	3	5	
—	6	0	0	0	(×400)
	1	3	3	5	
—	1	2	0	0	(×80)
		1	3	5	
—		1	3	5	(×9)
				0	

Use this method to calculate:

$2,208 \div 16$

$1,755 \div 45$

$1,536 \div 16$

There are 1,989 footballers in a tournament.
Each team has 11 players and 2 substitutes.
How many teams are there in the tournament?

Step 4: Long Division with remainders

Tommy uses this method to calculate 372 divided by 15.
He has used his knowledge of multiples to help.

			2	4	r	1	2
1	5	3	7	2			
—		3	0	0			
			7	2			
—			6	0			
			1	2			

$1 \times 15 = 15$

$2 \times 15 = 30$

$3 \times 15 = 45$

$4 \times 15 = 60$

$5 \times 15 = 75$

$10 \times 15 = 150$

Use this method to calculate:

$271 \div 17$

$623 \div 21$

$842 \div 32$

A school needs to buy 380 biscuits for parents' evening.
Biscuits are sold in packs of 12

How many packets will the school need to buy?

Which calculation is harder?

$1,950 \div 13$

$1,950 \div 15$

Explain why.

$6,120 \div 17 = 360$

Explain how to use this fact to find



$6,480 \div \text{star} = 360$

Jack is calculating $2,240 \div 7$

He says you can't do it because 7 is larger than all of the digits in the number.

Do you agree with Jack?
Explain your answer.

576 children and 32 adults need transport for a school trip.
A coach holds 55 people.



Dora

We need 10 coaches.



Eva

We need 11 coaches.



Alex

We need 12 coaches.

Who is correct? Explain how you know.

Step 5: Long Division with remainders

Amir used this method to calculate 1,426 divided by 13

			1	0	9	r	9	
1	3	1	4	2	6			
	–	1	3	0	0			(× 100)
			1	2	6			
	–		1	1	7			(× 9)
					9			

Use this method to calculate:

$$2,637 \div 16$$

$$4,453 \div 22$$

$$4,203 \div 18$$

A large bakery produces 7,849 biscuits in a day which are packed in boxes.

Each box holds 64 biscuits.

How many boxes are needed so all the biscuits are in a box?

Class 6 are calculating three thousand, six hundred and thirty-three divided by twelve.

Rosie says that she knows there will be a remainder without calculating.

Is she correct?

Explain your answer.

What is the remainder?

Which numbers up to 20 can 4,236 be divided by without having a remainder?

What do you notice about all the numbers?

EXTENSION:

A box of labels costs £24.

There are 100 sheets in the box.

There are 10 labels on each sheet.

Calculate the cost of one label, in pence.

Miriam and Alan each buy 12 tins of tomatoes.

Miriam buys 3 packs each containing 4 tins. A pack of 4 costs £1.40.

Alan buys 2 packs each containing 6 cans. A pack of 6 costs £1.90.

Who gets the most change from a £5 note?

A box of labels costs £63.

There are 140 sheets in the box.

There are 15 labels on each sheet.

Sara, Ramesh and Trevor want to calculate the cost of one label, in pence.

Ramesh uses the number sentence $(6300 \div 140) \times 15$.

Sara uses the number sentence $63 \div 1.4 \div 15$.

Trevor uses the number sentence $(15 \times 140) \div 6300$.

Who is using the right number sentence? Explain your choice.

Miriam buys 19 tins of soup. All the tins cost the same price.

She goes to the shop with just one note, and comes home with the tins and the change in coins. On the way home she drops the change. She looks carefully and she thinks she picks it all up. When she gets home she gives £2.23 change to her mother.

Do you think that Miriam picked up all the change that she dropped?

Explain your reasoning.

Alternatively, you could use the Oak Academy online lessons– including video, explanations and independent tasks

There are not any division lessons for Y6 but you could work on any subject area you feel you need to improve on: <https://www.thenational.academy/online-classroom/year-6/maths#subjects> – there is a really big section on fractions which could really help in recapping your knowledge.

Additional areas to work on:

Play on Hit the Button - focus multiplication tables.

Work through the areas of an arithmetic paper (which can be found on the KS2 Maths Organiser on the school website) Look at the Calculation Policy on the school website under 'Curriculum' and then 'Maths' for help in how to support + - x and ÷

<https://www.sampford-peverell-primary.devon.sch.uk/website/maths/459621>