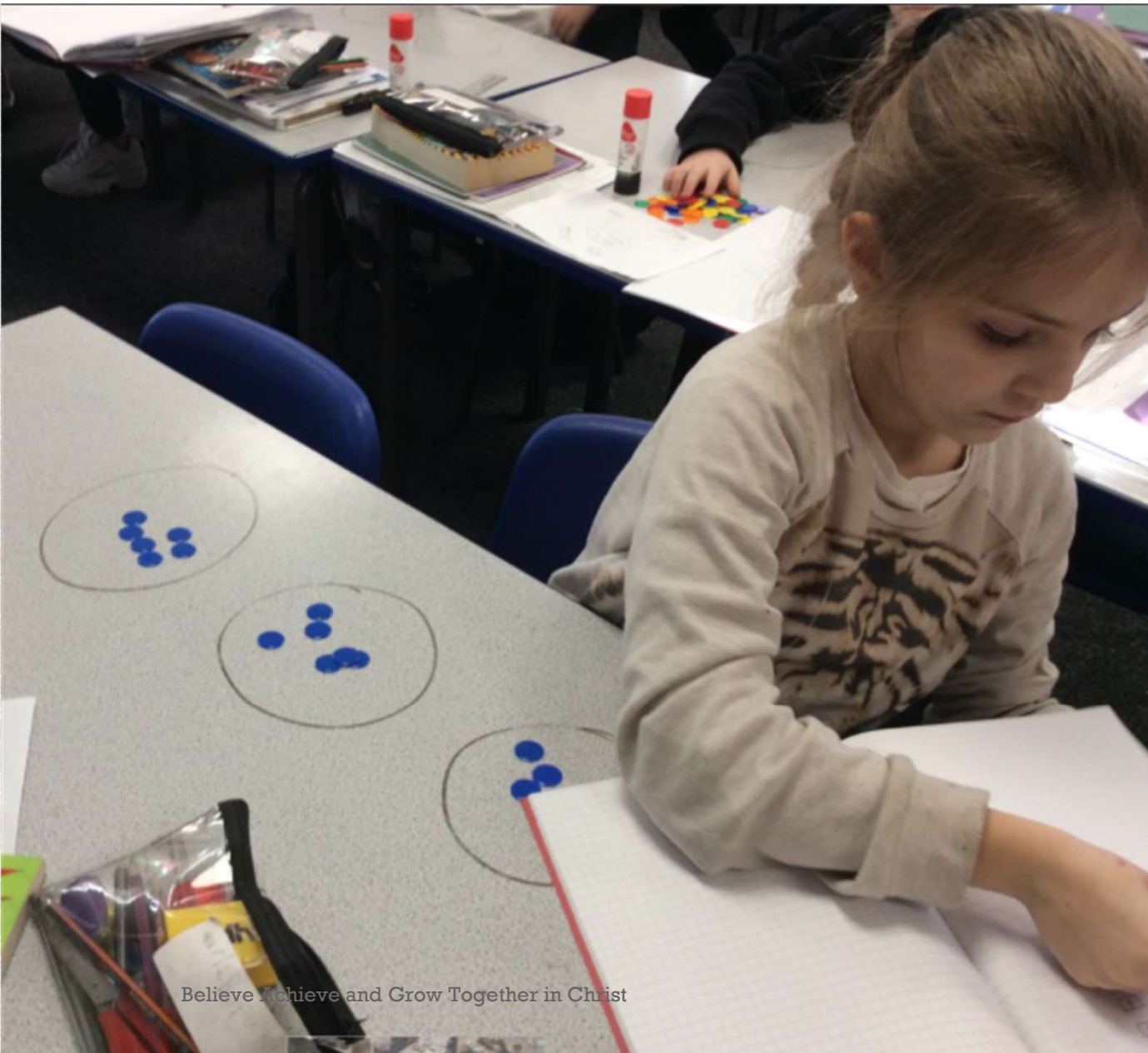


MATHS

AT SUTTON OAK CHURCH OF ENGLAND PRIMARY



Believe Achieve and Grow Together in Christ



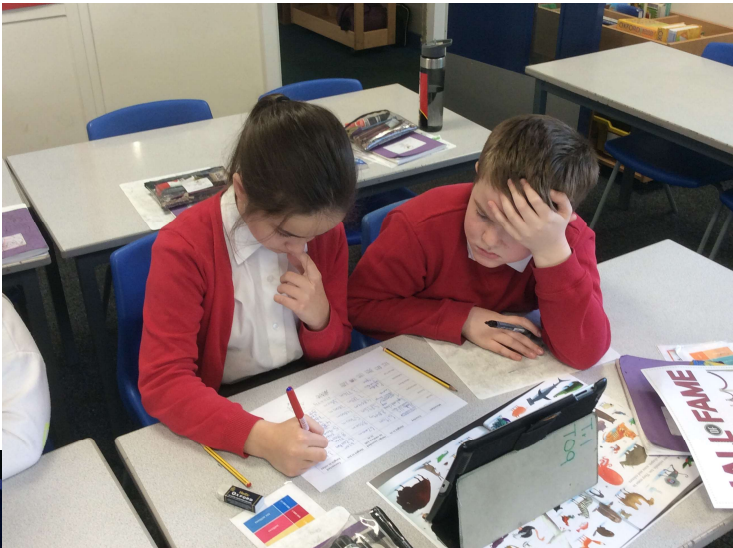
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AT SUTTON OAK WE BELIEVE IN THE MASTERY APPROACH.

- Pupils acquire a thorough, secure, long term and adaptable understanding within the subject.
- To support this we use a concrete, pictorial, abstract approach to help children to develop a rich understanding.
- Children are given the opportunity to practise fluency, reasoning and problem-solving skills within the classroom.



CELEBRATING NUMBER DAY



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TT ROCKSTARS

The launch of TT Rockstars saw us all dress up and enjoy battling each other.



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TT ROCKSTARS

- Regular rockstar battles are held where classes compete against each other and individuals compete to be the King or Queen of Rock and sit on a throne for the day!

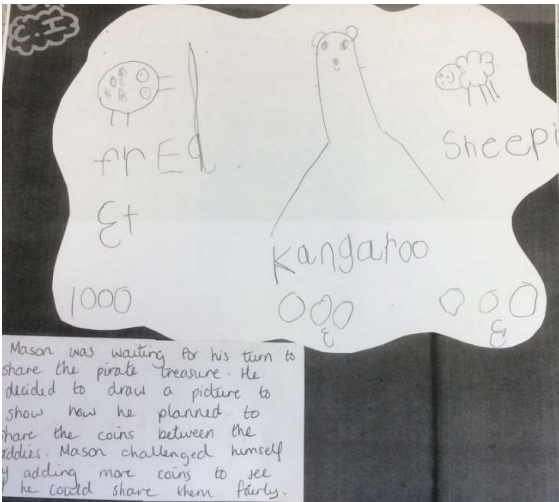
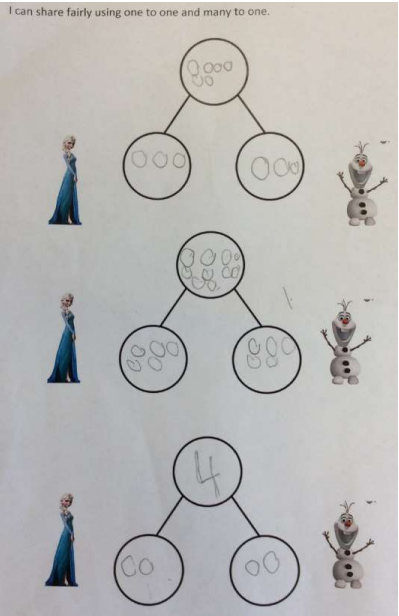


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PROGRESSION IN MULTIPLICATION AND DIVISION

In Foundation Stage we share things equally.



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PROGRESSION IN MULTIPLICATION AND DIVISION

- In KS1 we count in 2s, 5s and 10s. We learn our 2, 5 and 10 times tables.



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Tuesday 8th March.

I can count in 2s.

1 What are the numbers?

a)

b)

2 Circle 14 socks.

3 Fill in the missing numbers.

a)

0	2	4	6	8	10	12	14
---	---	---	---	---	----	----	----

b)

18	16	14	12	10	8	6	4
----	----	----	----	----	---	---	---

c)

10	12	14	16	18	20	22	24
----	----	----	----	----	----	----	----

Thursday 10th March - Counting in 5s

Hook

I can see 45 fingers.

It is right because I have counted 45.

I can count in 5s

1 What are the numbers? 5, 10, 15, 20

2 How many spots are there in total?

There are 25 spots in total.

3 Colour 35 petals.

4 Fill in the missing numbers.

a)

0	5	10	15	20	25	30	35
---	---	----	----	----	----	----	----

b)

50	45	40	35	30	25	20	15
----	----	----	----	----	----	----	----

c)

20	25	30	35	40	45	50
----	----	----	----	----	----	----

5 Mo counts up to 50 in 5s. Eva counts up to 50 in 2s. What numbers do they both say? any other numbers?

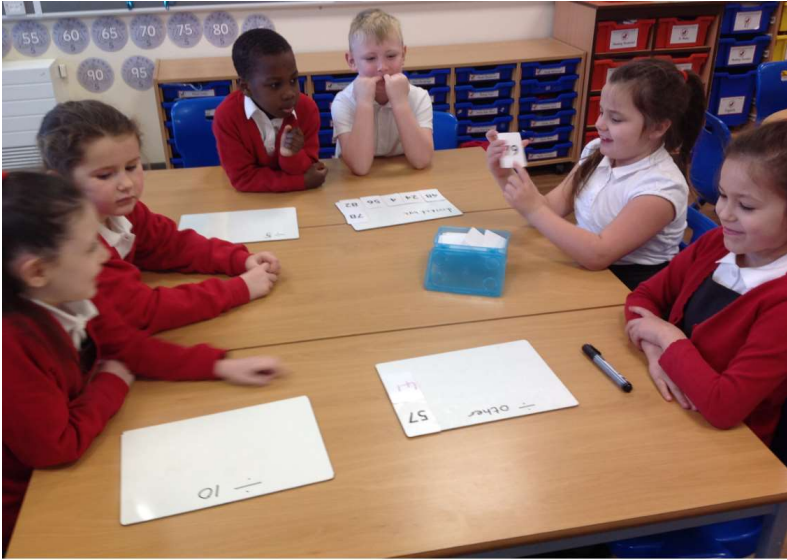
Can you spot a pattern?

I can see a pattern because they both say 50.



PROGRESSION IN MULTIPLICATION AND DIVISION

In KS1 we divide numbers using objects, pictures and then complete calculations.



10/1/22 I can share equally

1. Complete the divisions.
Use base 10 to help you.

100

a) $40 \div 2 = 20$ ✓ c) $40 \div 5 = 8$ ✓
b) $40 \div 4 = 10$ ✓ d) $40 \div 10 = 4$ ✓

Did you have to make any exchanges?

2. 30 flowers are shared equally between 5 vases.

a) Complete the division.
 $30 \div 5 = 6$ ✓

b) What does each part of the division represent?
Talk about it with a partner.

11/1/2021 I can divide by 5, 2, 10 and explore other numbers

	Can be divided	Cannot be divided
5	20 ✓ 10 ✓	11 19 ✓
2	4 6 ✓	19 5 ✓

4	5	6
8	10	11
12	14	15
18	19	20

	Can be divided	Cannot be divided
10	30 ✓ 20 ✓ 70 ✓	25 ✓ 2 ✓
Any other number	330	165

2	3	4
5	8	10
16	20	25
30	50	70



PROGRESSION IN MULTIPLICATION AND DIVISION

In LKS2 we become fluent in all our times tables. We multiply three numbers together and can multiply two and three digits by one digit.

Brett uses a place value chart to work out 5×32

Hundreds	Tens	Ones
	50	16

Complete the multiplication.

$$5 \times 32 = 160$$

Use a written method to complete the multiplications.

a) $38 \times 6 = 228$ c) $45 \times 9 = 405$

38	$\times 6$	45	$\times 9$
0	0	5	5
228	228	405	405
4	4	4	4

Class 4 is selling tickets for a play. Tickets cost £5 per person. 56 tickets have been sold so far. How much money has Class 4 collected?

$$56 \times 5 = 280$$

Rosie buys 8 bunches of flowers. Each bunch has 17 flowers. How many flowers does she have altogether?

$$8 \times 17 = 136$$

1a. Match the related facts.

A. 4×4 1. 5×30
 B. 6×2 2. 2×60
 C. 5×3 3. 40×4

1b. Match the related facts.

A. 8×4 1. 80×2
 B. 8×2 2. 40×4
 C. 6×4 3. 40×8

2a. Tick the fact that will help you solve 30×2 .

$3 \times 2 = 6$ $6 \times 3 = 18$
 $6 \times 3 = 18$ $6 \times 4 = 24$
 $7 \times 2 = 14$ $6 \times 4 = 24$

2b. Tick the fact that will help you solve 80×3 .

$6 \times 3 = 18$ $8 \times 3 = 24$
 $8 \times 3 = 24$ $6 \times 4 = 24$

How many different answers can you find?

20 and 12
24 and 10

Use Dorcas's fact to complete the calculations.

a) $5 \times 70 = 350$ d) $35 + 5 = 7$
 b) $7 \times 5 = 35$ e) $350 + 5 = 70$
 c) $50 \times 7 = 350$ f) $350 + 7 = 50$

Complete the multiplications.

a) $3 \times 4 \times 5 = 60$ d) $3 \times 5 \times 4 = 60$
 b) $2 \times 3 \times 8 = 48$ e) $3 \times 6 \times 10 = 180$
 c) $2 \times 4 \times 7 = 56$ f) $2 \times 5 \times 12 = 120$

Here are some digit cards. 3 5 6

a) Use the digit cards to create a multiplication and work the answer.

$3 \times 5 \times 6 = 90$

b) How many different multiplications can you create? What do you notice about all of your answers?

$5 \times 5 \times 3$
 $5 \times 5 \times 3$
 $3 \times 5 \times 5$
 $6 \times 3 \times 5$

They are multiplied together they are all equal to 75.

Kim rolls three 6-sided dice. The product of her numbers is 60.

a) What numbers could she have rolled?

$5 \times 6 \times 2 = 60$

b) How many different ways could Kim have made 60? Talk about it with a partner.

c) Roll three dice and find the product of the numbers you roll.

20 $4 \times 5 \times 3 = 60$

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PROGRESSION IN MULTIPLICATION AND DIVISION

In LKS2 we use our knowledge of times tables facts to help us with division. We divide two and three digits by one digit and divide with remainders.



Jin is making 5 party bags. How many of each item will he put in each bag? Remember, they need to be exactly the same.

 19 stickers In bag _____ Left over _____		$19 \div 5 = 3 \text{ r } 4$
 23 sweets In bag _____ Left over _____		$23 \div 5 = 4 \text{ r } 3$
 12 felt tips In bag _____ Left over _____		$12 \div 5 = 2 \text{ r } 2$

There are 14 people at his tea party. How many packets of each item does he need to buy so there is enough for everyone to have 1 of everything?

 2 drinks Packs _____ Left over _____		$2 \div 1 = 2$
 8 biscuits Packs _____ Left over _____		$8 \div 1 = 8$



PROGRESSION IN MULTIPLICATION AND DIVISION

In UKS2 we multiply three and four digits by 2 digits. We learn prime, squared and cubed numbers.



Multiply 4 digits by 1 digit

a) True or false? The answer is 12,222.

1000 1000 1000 1000 1000 1000 1000 1000

6 1 1 1
x 2

1 2 2 2 2 2

b) Solve: $3\,572 \times 3$. Use a formal method to show your working out.

10 7 16

3 5 7 2
x 3

10 7 1 6

c) There are 654 straws in a box.

th	h	t	o
6	5	4	

How many will there be in 4 boxes?

d) Alisha solved the calculation below and thinks the answer is 21,073.

7 3 4 x 3

th	h	t	o
7	3	4	

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

e) Work out the missing numbers. Use the place value chart to help you.

th	h	t	o
2	4	6	

2 4 6
x 3

7 2 4 8

f) A set of desks cost 2705. Mrs Rouse buys four sets for her school. She says the total cost is £10,820.

Is she correct? Complete the chart and use a formal method to prove it.

th	h	t	o

Square and Cube Numbers

Complete the table.

2 ²	2 x 2	4
2 ³	2 x 2 x 2	8
3 ²	3 x 3	9
3 ³	3 x 3 x 3	27
5 ²	5 x 5	25
5 ³	5 x 5 x 5	125

Find 4 square numbers that come between 100 and 200.

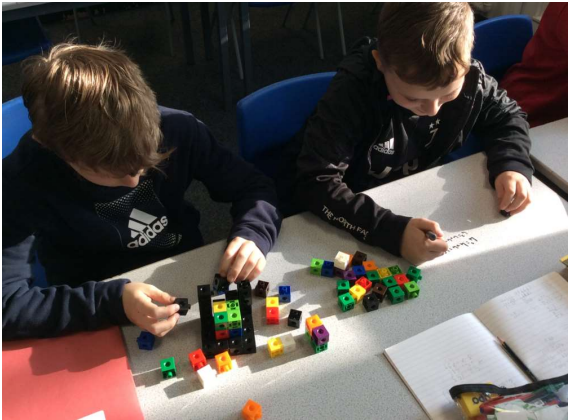
Use <, > or = to make these correct:

9 squared < 5 cubed
3 cubed > 4 squared
9 squared > 4 cubed

Dexter works out 20 squared. Annie works out 20 cubed. Find the difference between Dexter's and Annie's numbers.

1600

I am thinking of 2 numbers. When I add them I get a prime number. When I multiply them I get a square number. What numbers could I be thinking of?



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PROGRESSION IN MULTIPLICATION AND DIVISION

In UKS2 we divide four digits by one digit and learn formal long division. We can express our remainders as decimals.

Challenge Task

A) Find the missing numbers

$$\begin{array}{r} 1 \square 7 \\ \times 1 \square 9 \\ \hline 1099 \end{array} \quad \begin{array}{r} 7 - 187 \\ \square \\ \square \\ \square \end{array}$$

B) Solve the word problems

1) At the factory, chocolate bars are packed in boxes of 9. How many boxes can be filled if there are 2,782 chocolate bars ready to be packed? Complete the model and short division calculation.

2) Jade has won £8,940 on the lottery and wants to share it between her 4 grandchildren. How much will each child receive? Complete the model and short division calculation.

C) Use $<$, $>$ or $=$ to make the statements correct.

$7914 \div 3$	$>$	$7914 \div 6$
$2781 \div 3$	$<$	$3708 \div 4$

D) A teacher asks some children to organise a box of 5760 kite hoops by gathering them into 40 boxes. How many kite hoops will each child get?

Divide 3 Digits by 1 Digit

1. Use the place value counters to complete the calculation below.

H	T	O
10	10	1
10	10	1
10	10	1
10	10	1

$844 \div 4 = 211$

2. Complete the part-whole model to divide six hundred and seventy-eight by six.

$678 \div 6 = 113$

3. Jill has spill ketchup all over her maths homework!

She divided 724 by a 1-digit number and had a remainder of 4.

$724 \div \square = \square \text{ r } 4$

What could her calculation have been? Find 2 possible solutions.

4. Marcus says, "I can divide 654 equally by 2 and 4 because all of these numbers are even."

He is incorrect because the answer for $654 \div 4 = 163.5$. Is he correct? Convince me.

5. Use the digit cards to correctly complete the calculation.

$9 \square 5 \div 3 = 3 \square \square$

Find 2 possible answers.

$845 \div 3 = 315$

Hook

I know... so...

$24 \times 18 = 432$

$25 \times 18 = 450$

$25 \times 17 = 425$

I know $432 \div 18 = 24$ because $24 \times 18 = 432$. So $432 \div 25$ is not possible. Let us try $432 \div 25 = 17.28$ because $17 \times 25 = 425$ and $432 - 425 = 7$. So $7 \div 25 = 0.28$. So 17.28 is the answer.

$17.8 \div 1.3 = 13.7$

$1 \times 11 = 11$

$2 \times 14 = 28$

$4 \times 14 = 56$

$5 \times 14 = 70$

$10 \times 14 = 140$

$20 \times 14 = 280$

$40 \times 14 = 560$

$50 \times 14 = 700$

$60 \times 14 = 840$

$1 \times 26 = 26$

$2 \times 26 = 52$

$4 \times 26 = 104$

$5 \times 26 = 130$

$10 \times 26 = 260$

$20 \times 26 = 520$

$40 \times 26 = 1040$

$50 \times 26 = 1300$

$1 \times 30 = 30$

$2 \times 30 = 60$

$4 \times 30 = 120$

$5 \times 30 = 150$

$10 \times 30 = 300$

$20 \times 30 = 600$

$30 \times 30 = 900$

$40 \times 30 = 1200$

$50 \times 30 = 1500$

$1 \times 40 = 40$

$2 \times 40 = 80$

$4 \times 40 = 160$

$5 \times 40 = 200$

$10 \times 40 = 400$

$20 \times 40 = 800$

$30 \times 40 = 1200$

$40 \times 40 = 1600$

$50 \times 40 = 2000$

$1 \times 50 = 50$

$2 \times 50 = 100$

$4 \times 50 = 200$

$5 \times 50 = 250$

$10 \times 50 = 500$

$20 \times 50 = 1000$

$30 \times 50 = 1500$

$40 \times 50 = 2000$

$50 \times 50 = 2500$

Amazing Katie

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PUPIL VOICE

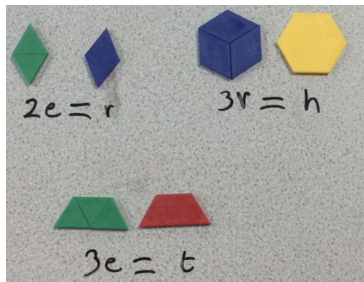
Maths is my favourite lesson.

Maths is important in your daily life when you are buying things, measuring and for your future job.

I really like learning new things in Maths. It is different every day.

Maths is the lesson I look forward to the most.

WE LOVE MATHS AT SUTTON OAK



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