Year 4 Parent/Carer Meeting

Multiplication Tables Check (MTC)

Friday 22nd November



Important information about multiplication tables check (MTC)

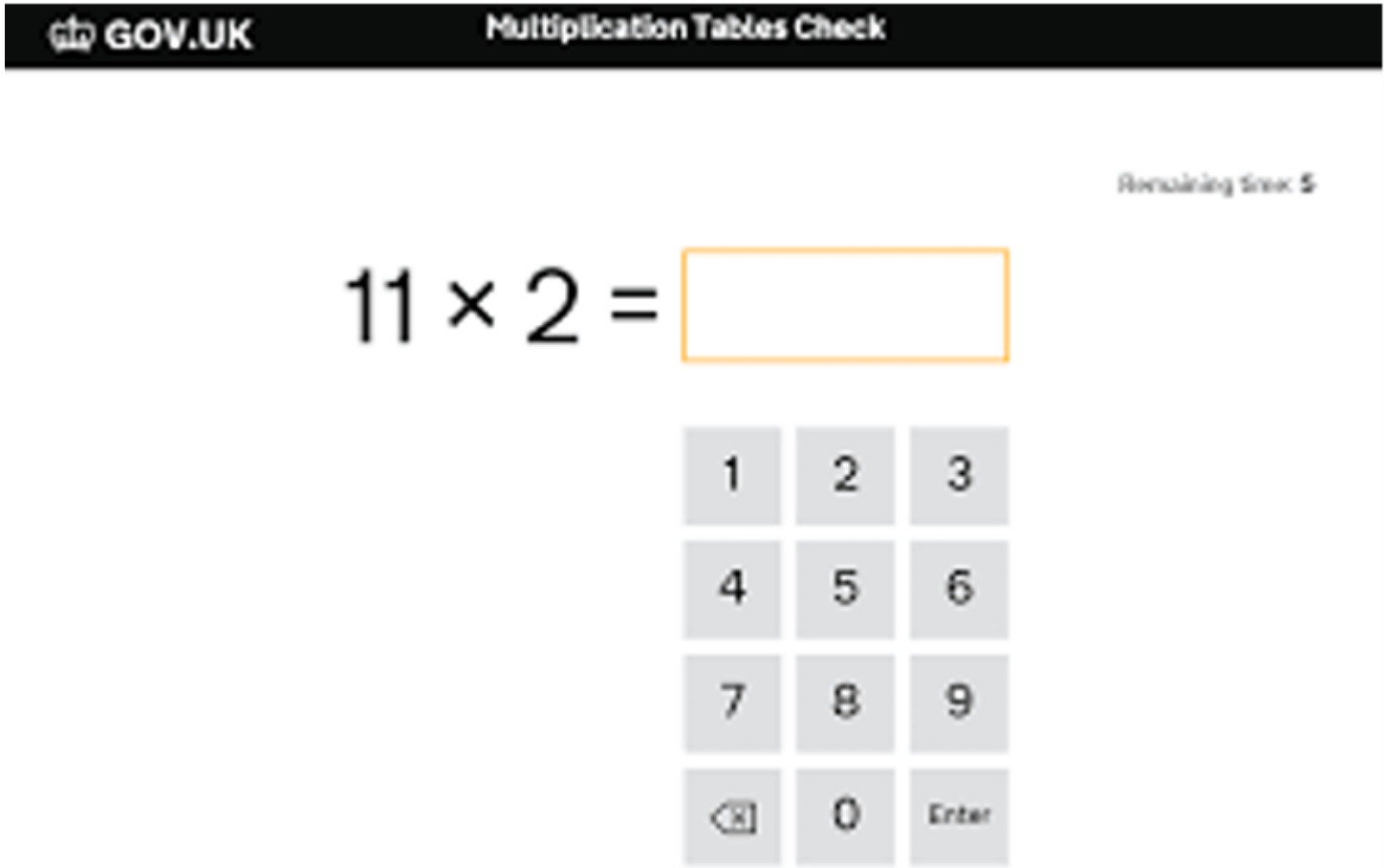
- The MTC determines if Year 4 children can fluently recall their multiplication tables.
- They are designed to help schools identify which children require more support to learn their times tables.
- There is no ‘pass’ rate or threshold which means that, unlike the Phonics Screening Check, children will not be expected to re-sit the check.
- The Department for Education (DfE) will create a report about the overall results across all schools in England, not individual schools.
- There will be a 2-week window from Monday 2nd June for schools to administer the check.

How the check is carried:

- The check will be fully digital.
- Answers will be entered using a keyboard, by pressing digits using a mouse or using an on-screen number pad.
- Usually, the check will take less than 5 minutes for each child.
- The children will have 6 seconds from the time the question appears to input their answer.
- There will be a total of 25 questions with a 3 second pause in between questions.
- There will be 3 practice questions before the check begins.

The check questions

- Each child will be randomly assigned a set of questions
- There will only be multiplication questions in the check, not division facts.
- The 6, 7, 8, 9 and 12 times tables are more likely to be asked.
- Reversal of questions (e.g. 8 x 6 and 6 x 8) will not be asked in the same check.
- Children will not see their individual results when they complete the check.



We will practise using online tools closer to the test so that children are used to the format.

Why are times tables useful?



Adding, subtracting, multiplying and dividing fractions

$\frac{3}{4} \times \frac{2}{3} = \frac{6}{12}$

$\frac{1}{3} + \frac{1}{6}$

$\frac{1}{3} \overset{\times 2}{+} \frac{1}{6}$ ($\times 2$)

$\frac{2}{6} + \frac{1}{6}$

Simplifying fractions

$\frac{9}{15} \div 3 = \frac{3}{5}$

$\frac{9}{15} \div 3 = \frac{3}{5}$

Using scale factors

2 people	1 person	5 people
6 eggs	6 ÷ 2 = 3 eggs	3 x 5 = 15 eggs
100g flour	100 ÷ 2 = 50g	50 x 5 = 250g

Finding a fraction or a percentage of a number

$\frac{3}{4}$ of 48

12 | 12 | 12 | 12

48 ÷ 4 = 12
dividing by 4 finds one quarter.

12 x 3 = 36
multiplying by 3 finds 3 quarters

Calculating volume

2cm, 3cm, 5cm

4cm, 9cm, 12cm, 27 cm, ?

Calculating ratio

A prize is shared in a ratio of 3 : 4 between Jamie and Dan. If Jamie gets £ 2 1, how much will Dan get?

Jamie : Dan
3 : 4
2 1 : 2 8
x 7, x 7

Using known facts

If 3 x 2 = 6, then
3 x 20 = 60
30 x 2 = 60
30 x 20 = 600

Using algebraic rules

1st term:	5	x	1	-	4	= 1
2nd term:	5	x	2	-	4	= 6
3rd term:	5	x	3	-	4	= 11
4th term:	5	x	4	-	4	= 16
5th term:	5	x	5	-	4	= 21

Finding the area of rectangles, triangles and parallelograms.

4cm, 9 x 4 = 36 cm², 9cm

10 x 7 = 70cm², 7cm, 10cm

(b x h) ÷ 2
7cm
1) 10 x 7 = 70 cm²
2) 70 ÷ 2 = 35cm²

Why are times tables useful?

Converting between mixed and improper fractions

add

$1\frac{3}{4} = \frac{7}{4}$

multiply

Convert between miles and kilometres

To convert km to miles:

5 miles= 8km
30 miles= 48km

1) Divide by 8 (48 ÷ 8=6)
2) Multiply by 5 (6 x 5 = 30)

Short and long division

$5 \overline{)6\,2\,5}$ = 1 2 5

Finding prime factors

5 2
2, 2 6
13, 2

Square and cube numbers

$2^2 = 2 \times 2 = 4$

$4^2 = 4 \times 4 = 16$

$3^3 = 3 \times 3 \times 3 = 27$

Factors and common factors

48		36	
1	x 48	1	x 36
2	x 24	2	x 18
3	x 16	3	x 12
4	x 12	4	x 9
6	x 8	6	x 6

Ordering and comparing fractions

$\frac{2}{3} \times 4 = \frac{8}{12}$ $<$ $\frac{3}{4} \times 3 = \frac{9}{12}$

Finding equivalent fractions

$\frac{2}{3} \times 4 = \frac{8}{12}$

$\frac{3}{4} \times 3 = \frac{9}{12}$

Identifying prime and composite numbers

A prime number is a whole number greater than 1 with no divisors except 1 and itself.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20

Multiples and common multiples

Multiples of 3: 3, 6, 9, 12, 18, 21, 24

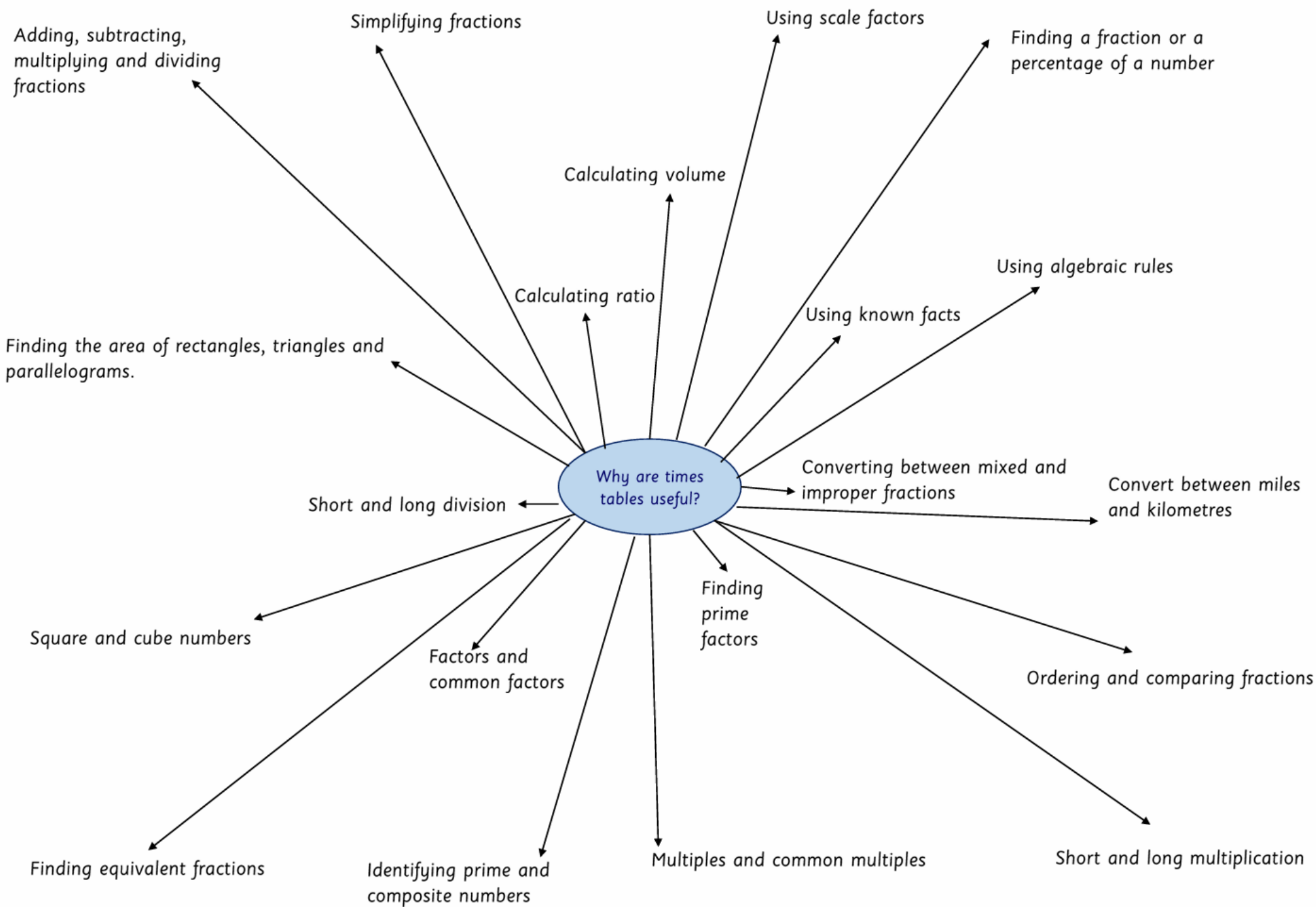
Multiples of 4: 4, 8, 12, 16, 20, 24, 28, 32

Short and long multiplication

$853 \times 6 = 5118$

$32 \times 45 = 1440$

@SarahFarrellKS2


Why are times tables useful?
Adding, subtracting, multiplying and dividing fractions
Simplifying fractions
Using scale factors
Finding a fraction or a percentage of a number
Calculating volume
Calculating ratio
Using algebraic rules
Using known facts
Finding the area of rectangles, triangles and parallelograms.
Converting between mixed and improper fractions
Convert between miles and kilometres
Short and long division
Square and cube numbers
Factors and common factors
Finding prime factors
Ordering and comparing fractions
Finding equivalent fractions
Identifying prime and composite numbers
Multiples and common multiples
Short and long multiplication

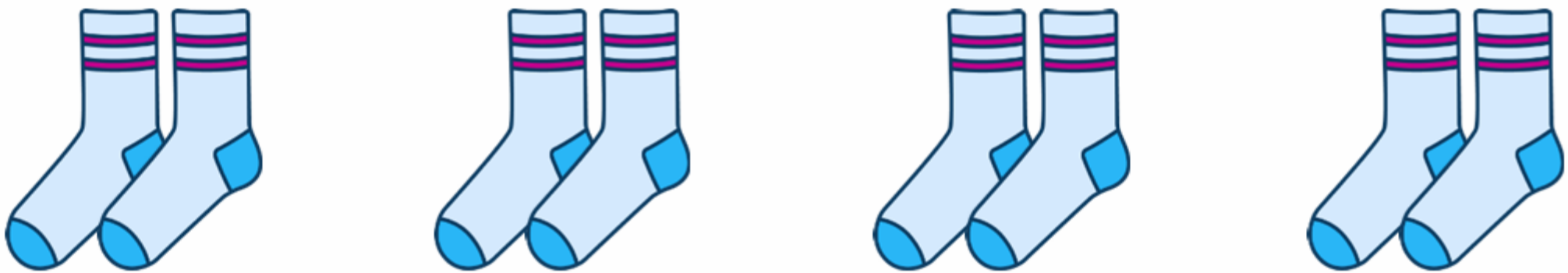
Ways to support times table knowledge

- Count and look for patterns.
- Understand that multiplication is repeated addition.
- Remember that multiplication is commutative. (2x7 is same as 7x2)
- Remember that multiplication is the inverse of division.
- Recall and utilise fact families.
- Use different representations to represent multiplication, such as manipulatives such as multilink, cubes or counters, dried beans, pasta.
- Create pictorial representations such as arrays.

Counting and looking for patterns

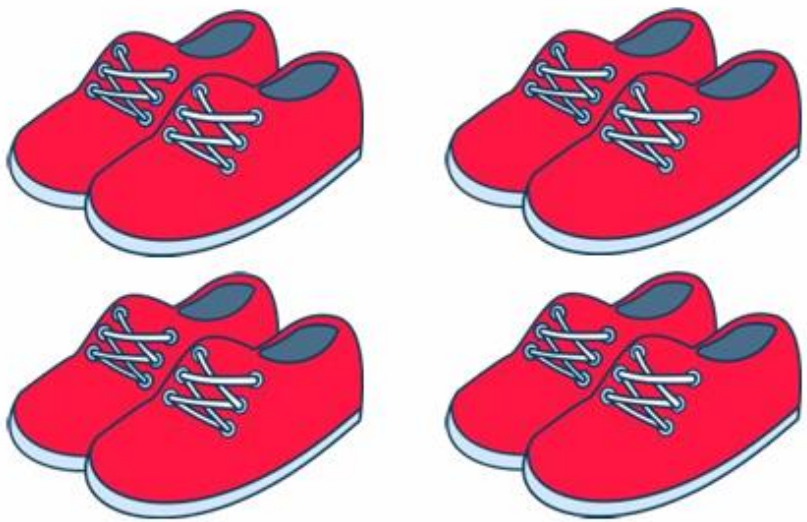
Example: Counting in 2s
2, 4, 6, 8, 10…

- Ensure children have a strong understanding of counting in groups first.
- When children are secure with counting, they can then look for patterns.

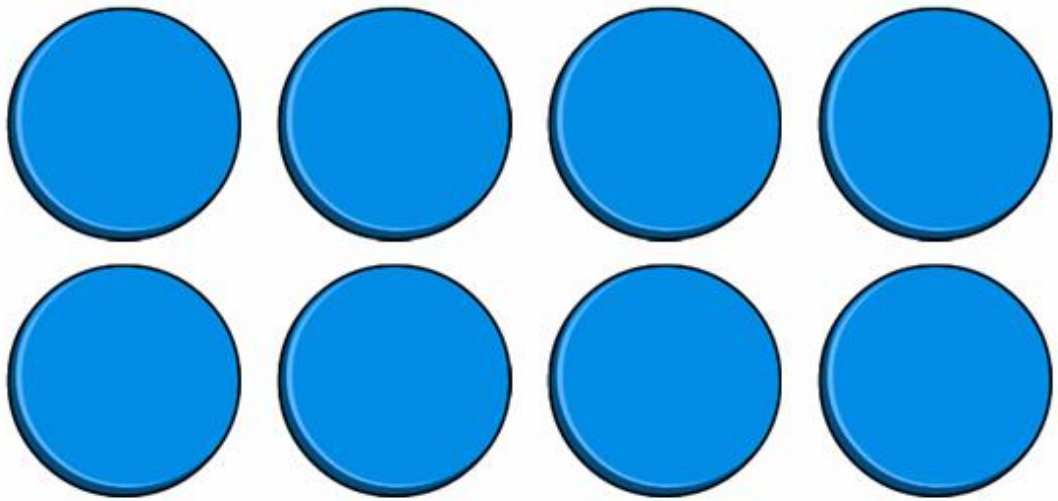


Repeated addition

Knowing that 2 x 4 is the same as 2 + 2 + 2 + 2



2 + 2 + 2 + 2 = ?

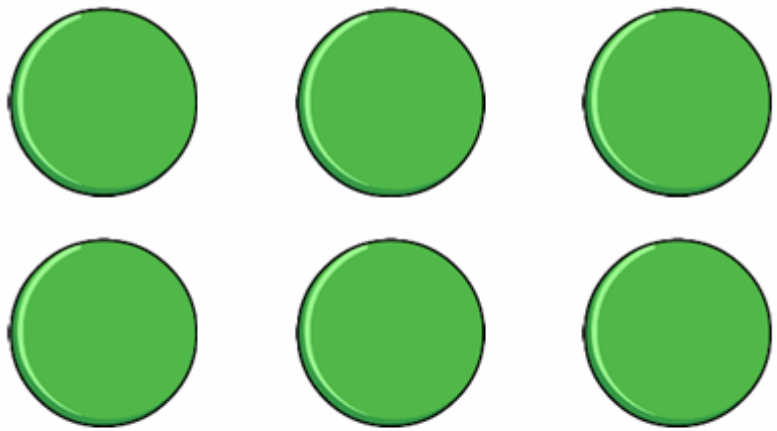


2 x 4 = ?

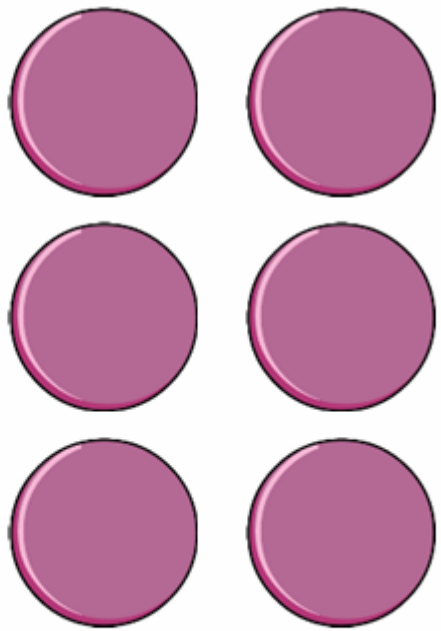
Multiplication is commutative

3 x 2 is the same as 2 x 3

Children need to understand that multiplication can be completed in any order to produce the same answer. Sometimes this link needs to be made explicit.



3 lots of 2 = 6

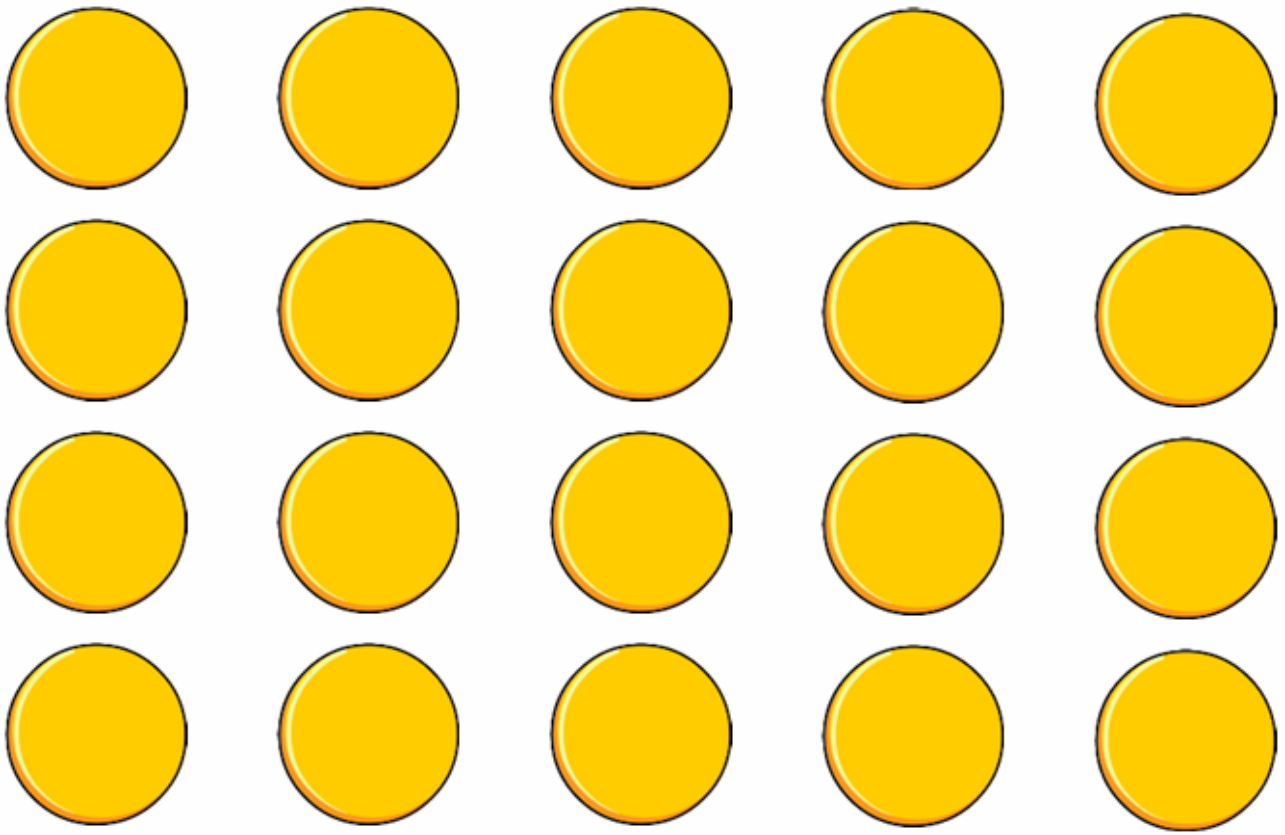


2 lots of 3 = 6

Multiplication is the inverse of division (won't be in the check but secures understanding and helps to build links).

$20 \div 5 = 4$ can be worked out because $5 \times 4 = 20$

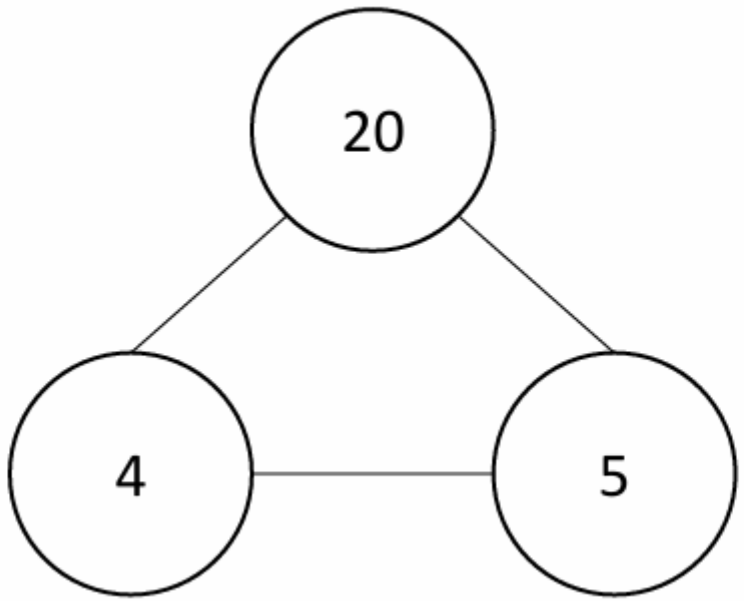
Using pictorial representations (such as arrays) is useful here for children to see the link between multiplication and division.



Fact families (Not in the check but helps to form links and deepen understanding.)

$4 \times 5 = 20$, $5 \times 4 = 20$, $20 \div 5 = 4$, $20 \div 4 = 5$

Due to their commutative understanding, children should also be able to see whole number families. For many children this will need to be pointed out and discussed.



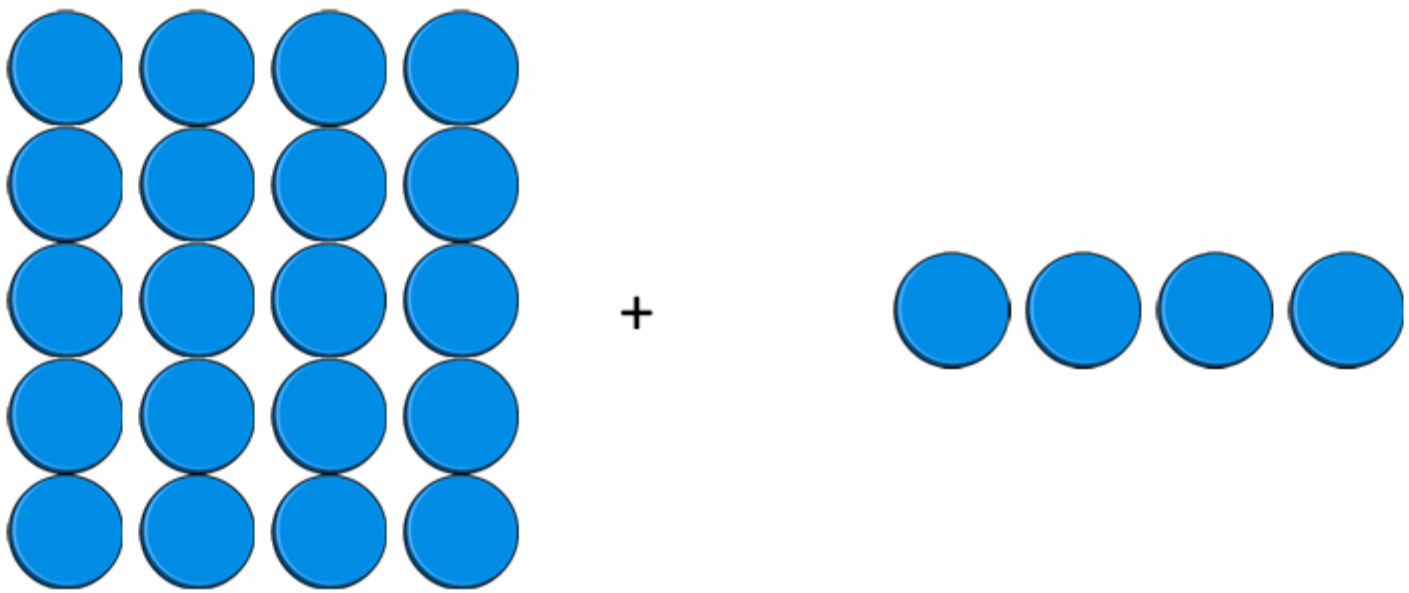
Using known facts

4 x 6 = ?

I know 4 x 5 = 20

Therefore, I need one more lot of four 20 + 4 =24

By using known facts from ‘easier’ times tables, children should be able to find answers with increasing speed.



What are we doing in class to support your child?

- Weekly Sound check using Times Table Rock Stars
- iPads in class regularly to support with practice
- Starters to maths lessons linked to times tables
- In depth times table lessons focus on each set
- Worksheets linked to weekly sound check on TTRS
- Online games and board games in class
- Making times tables fun!

How best to prepare your child for the check

- Remind them that the check should last no more than 5 minutes and is just a chance to show what they know- not something to worry about.
- When going over times tables, make them fun.
- If you have any concerns, talk to your child's teacher.
- If your child has any concerns, encourage them to talk

Websites to support Times Tables knowledge

TTRS - Times Tables Rock Stars – Times Tables Rock Stars

Hit the button - Times Tables Games for 7 to 11 year olds

You can use this free multiplication table check which will give you an idea of the speed at which children will be asked questions:

https://mathsframe.co.uk/en/resources/resource/477/Multiplicati on-Tables-Check

https://www.timestables.co.uk/

Multiplication Tables Check - Mathsframe