

WELCOME

to today's Maths lesson

28.01.21

Related multiplication calculations



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Related multiplication calculations



Good morning, Year 3.

In today's Maths lesson, we are going to be continuing with Multiplication and Division and looking at **related multiplication calculations**.

Please watch the video of Miss Robertson talking you through today's lesson (link on the website). You might also like to watch the White Rose Maths video *(pause it at 5.20 as it starts to talk about division)*

If you have any questions or would like to send in any work, please email it to:

yearthree@st-jo-st.dudley.sch.uk

Well done everyone, you are all superstars ☺

Love

Miss Robertson xxxx



Starter activities:

Today's Tough Ten

1	$3 \times 5 =$
2	$= 8 + 4 + 3$
3	$= 45 \div 9$
4	$= 81 - 40$
5	$54 \div 27 =$
6	$22 \div 2 =$
7	$\frac{2}{4} \text{ of } 8 =$
8	$83 - 24 =$
9	$8 \times 10 =$
10	$45 \div 5 =$

13.					14.					15.					16.				
	1	0	9			2	3	7			2	9	0			8	6	2	
+	4	9	8		+		6	8		+	2	7	6		+		6	7	

Deepen it:

Pick one question and write a number story for it.

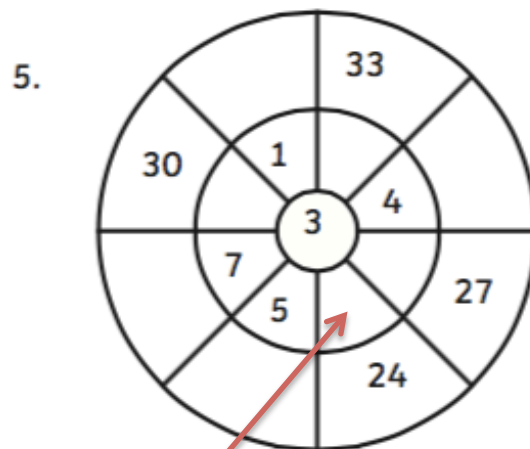
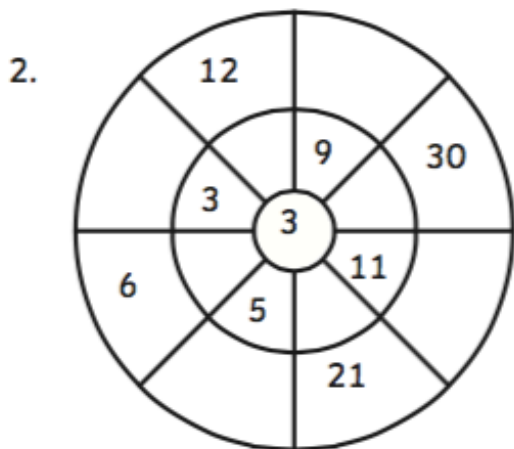
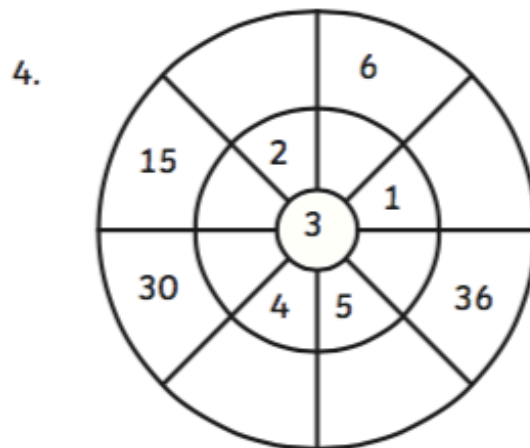
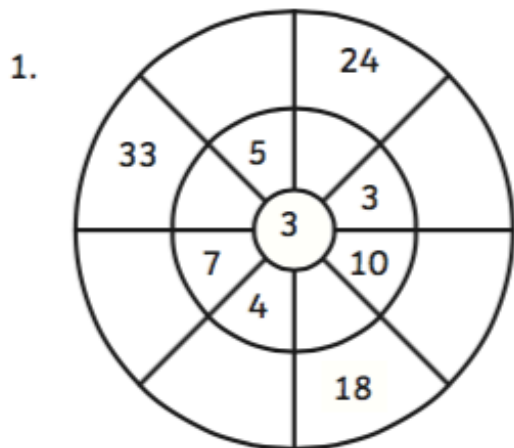
Miss Robertson's example:

Patrick has 22 sweets. He shares them with Feliks. How many sweets do they each get?



Remember, finding $\frac{2}{4}$ of something is the same as finding $\frac{1}{2}$ of something.

Times table practise:



When there is a missing number in the centre of the wheel, think about what you multiply 3 by to get the number on the outside e.g. $3 \times \underline{\quad} = 24$

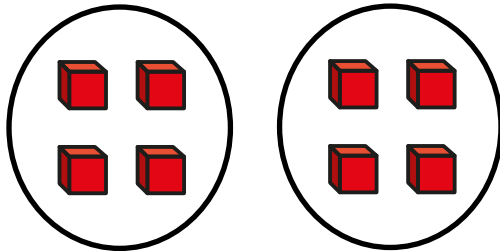


Remember, you can also logon to TTRS to practise too :D

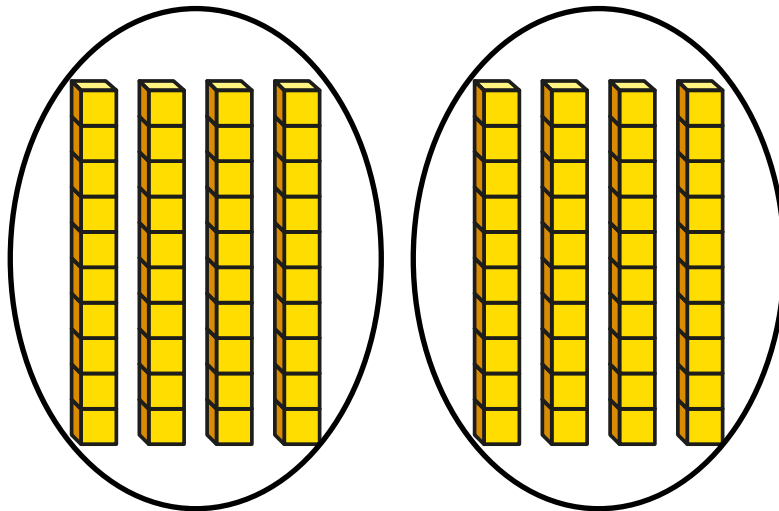




Today, we are going to use the multiplication facts that we know to help us with some trickier ones.



$$2 \times 4 \text{ ones} = \boxed{8} \text{ ones}$$
$$2 \times 4 = \boxed{8}$$



$$2 \times 4 \text{ tens} = \boxed{8} \text{ tens}$$
$$2 \times 40 = \boxed{80}$$

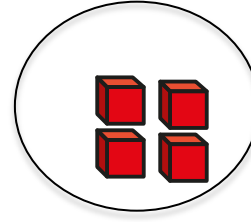
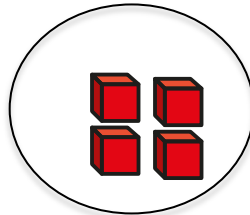
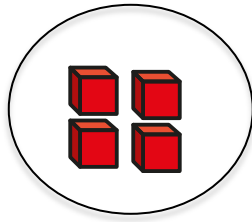
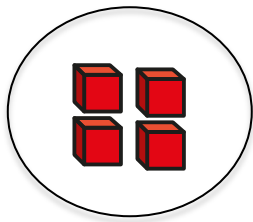


40 is ten times bigger than 4.

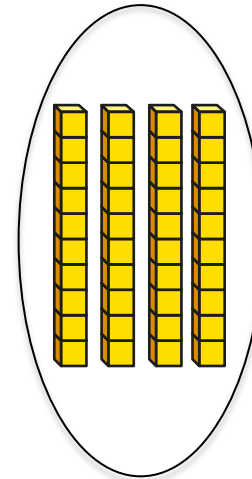
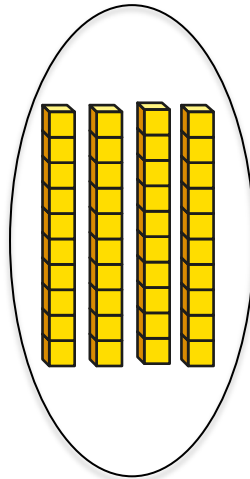
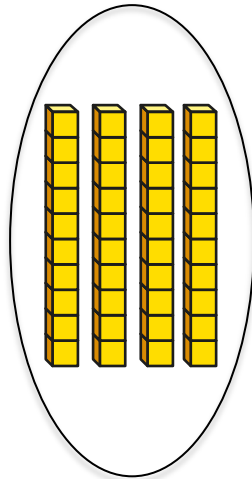
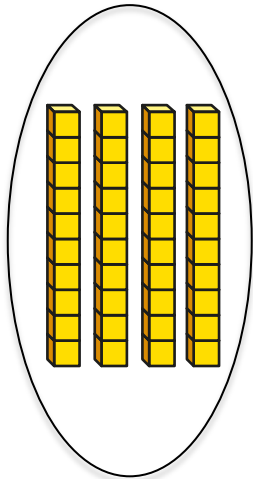
So to work out 2×40 , we can do 2×4 and then multiply our answer by 10 😊



Today, we are going to use the multiplication facts that we know to help us with some trickier ones.



$$4 \times 4 = 16$$



$$4 \times 40 = 160$$

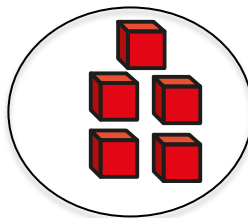
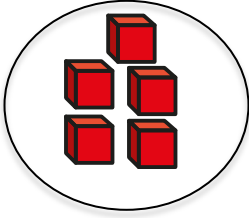
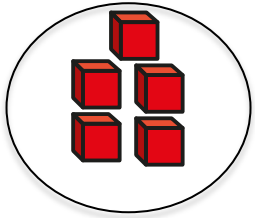


40 is ten times bigger than 4.

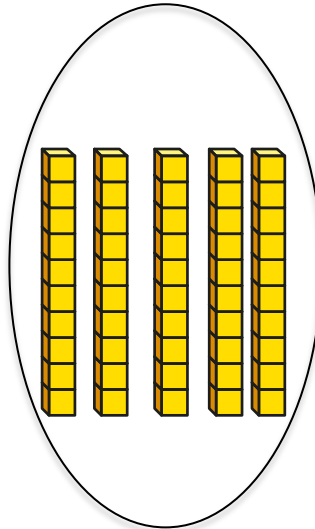
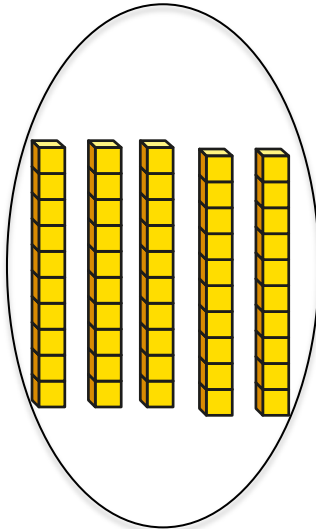
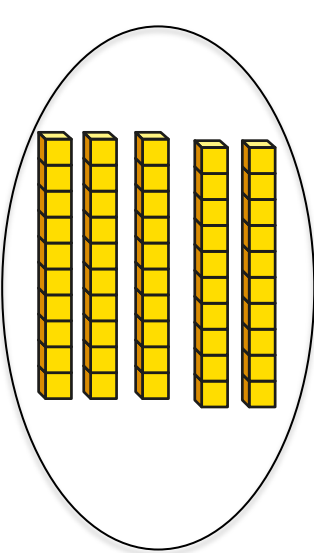
So to work out 4×40 , we can do 4×4 and then multiply our answer by 10 😊



Today, we are going to use the multiplication facts that we know to help us with some trickier ones.



$$3 \times 5 = 15$$



$$3 \times 50 = 150$$



50 is ten times bigger than 5.

So to work out 3×50 , we can do 3×5 and then multiply our answer by 10 😊



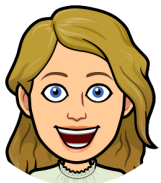
$$3 \times 3 = 9$$

$$3 \times 30 = \underline{\hspace{2cm}}$$



30 is 10 times bigger than 3. So, to work it out we can do 3×3 and then multiply the answer by 10.

Remember, to multiply a number by 10, we move the digits 1 place to the left and add a place holder zero.



Hundreds	Tens	Ones
		9

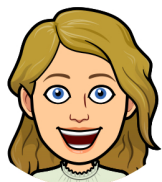


Hundreds	Tens	Ones
	9	0



$$4 \times 3 = 12$$

$$4 \times 30 = \underline{\hspace{2cm}}$$



30 is 10 times bigger than 3. So, to work it out we can do 4×3 and then multiply the answer by 10.

Remember, to multiply a number by 10, we move the digits 1 place to the left and add a place holder zero.



Hundreds	Tens	Ones
	1	2



Hundreds	Tens	Ones
1	2	0



1. $3 \times 3 = \underline{\quad}$
so $3 \times 30 = \underline{\quad}$

2. $7 \times 3 = \underline{\quad}$
so $7 \times 30 = \underline{\quad}$

3. $9 \times 3 = \underline{\quad}$
so $9 \times 30 = \underline{\quad}$

4. $10 \times 3 = \underline{\quad}$
so $10 \times 30 = \underline{\quad}$

5. $4 \times 3 = \underline{\quad}$
so $4 \times 30 = \underline{\quad}$

6. $6 \times 3 = \underline{\quad}$
so $6 \times 30 = \underline{\quad}$

Complete the number sentences.

a) $2 \times 4 = \square$

$2 \times 40 = \square$

b) $5 \times 3 = \square$

$5 \times 30 = \square$

c) $5 \times 2 = \square$

$5 \times 20 = \square$

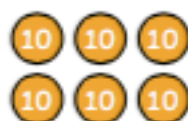
d) $2 \times 8 = \square$

$80 \times 2 = \square$

Complete the calculation for each set of place value counters.



a) $\underline{\quad} \times \underline{\quad} = \underline{\quad}$



b) $\underline{\quad} \times \underline{\quad} = \underline{\quad}$



c) $\underline{\quad} \times \underline{\quad} = \underline{\quad}$



d) $\underline{\quad} \times \underline{\quad} = \underline{\quad}$



e) $\underline{\quad} \times \underline{\quad} = \underline{\quad}$



f) $\underline{\quad} \times \underline{\quad} = \underline{\quad}$



g) $\underline{\quad} \times \underline{\quad} = \underline{\quad}$



h) $\underline{\quad} \times \underline{\quad} = \underline{\quad}$

Deepen it:



There are _____ columns of _____ boxes.

_____ \times _____ = _____

There are _____ boxes altogether.

Each box contains ten tennis balls.

There are _____ columns of _____ balls.

_____ \times _____ = _____

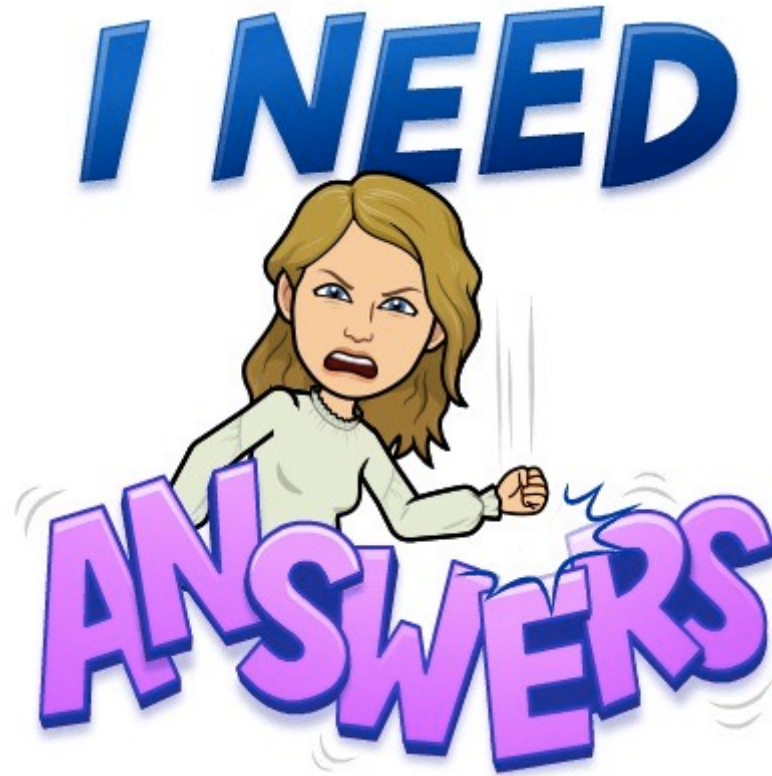
There are _____ balls altogether.



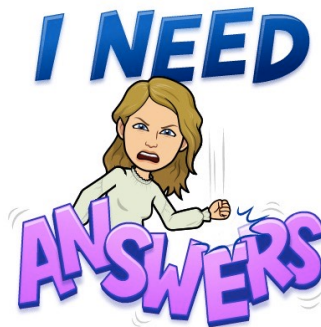
I know that when multiplying 3 by 40, 40 is ten times bigger than 4, so my answer will be ten times bigger than 3×4

Is Mo correct?

Explain your answer.



**Answers are coming up on the next slide.
No peeking until you have completed the
questions 😊**



1. $3 \times 3 = 9$
so $3 \times 30 = 90$

2. $7 \times 3 = 21$
so $7 \times 30 = 210$

3. $9 \times 3 = 27$
so $9 \times 30 = 270$

4. $10 \times 3 = 30$
so $10 \times 30 = 300$

5. $4 \times 3 = 12$
so $4 \times 30 = 120$

6. $6 \times 3 = 18$
so $6 \times 30 = 180$

Use base 10 to represent the multiplications.

Complete the number sentences.

a) $2 \times 4 = \boxed{8}$

$2 \times 40 = \boxed{80}$

b) $5 \times 3 = \boxed{15}$

$5 \times 30 = \boxed{150}$

c) $5 \times 2 = \boxed{10}$

$5 \times 20 = \boxed{100}$

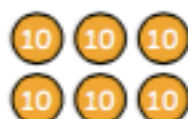
d) $2 \times 8 = \boxed{16}$

$80 \times 2 = \boxed{160}$

Complete the calculation for each set of place value counters.



a) $\underline{\quad} \times \underline{\quad} = \underline{\quad}$



b) $\underline{\quad} \times \underline{\quad} = \underline{\quad}$



c) $\underline{\quad} \times \underline{\quad} = \underline{\quad}$



d) $\underline{\quad} \times \underline{\quad} = \underline{\quad}$



e) $\underline{\quad} \times \underline{\quad} = \underline{\quad}$



f) $\underline{\quad} \times \underline{\quad} = \underline{\quad}$



g) $\underline{\quad} \times \underline{\quad} = \underline{\quad}$



h) $\underline{\quad} \times \underline{\quad} = \underline{\quad}$

a) $3 \times 2 = 6$ or $2 \times 3 = 6$

b) $30 \times 2 = 60$ or $20 \times 3 = 60$

c) $8 \times 3 = 24$ or $3 \times 8 = 24$

d) $80 \times 3 = 240$ or $30 \times 8 = 240$

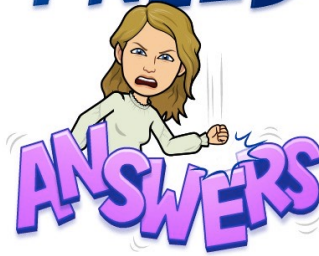
e) $4 \times 5 = 20$ or $5 \times 4 = 20$

f) $40 \times 5 = 200$ or $50 \times 4 = 200$

g) $10 \times 3 = 30$ or $3 \times 10 = 30$

h) $100 \times 3 = 300$ or $30 \times 10 = 300$

I NEED



There are _____ columns of _____ boxes.

_____ \times _____ = _____

There are _____ boxes altogether.

Each box contains ten tennis balls.

There are _____ columns of _____ balls.

_____ \times _____ = _____

There are _____ balls altogether.

There are 6 columns of 4 boxes.

$$6 \times 4 = 24$$

There are 24 boxes altogether.

Each box contains ten tennis balls.

There are 6 columns of 40 balls.

$$6 \times 40 = 240$$

There are 240 balls altogether.



I know that when multiplying 3 by 40, 40 is ten times bigger than 4, so my answer will be ten times bigger than 3×4

Is Mo correct?

Explain your answer.

Mo is correct. I know $3 \times 4 = 12$, so if he has 3×40 then his answer will be ten times bigger because 4 has become ten times bigger.

Thank you for working so hard.

Please send in any photos of your work or any questions you have to yearthree@st-jo-st.dudley.sch.uk

It is always a pleasure to see all of your work.

