



Maths

Multiplication and Division

Multiplication Magic



Aim

- I can multiply multiples of 10 using Multiplication Magic.

Success Criteria

- I can draw the wizard's hat to join the facts.
- I can calculate the facts using multiplication tables.

Beat the Clock



Your teacher will tell you which columns to complete.
The stopwatch will stop after **5 minutes**.

If you finish before the clock, shout **'finished!'** and your teacher will tell you your time. Write this at the top of the sheet.

When your work is marked your teacher will give you a score.

If you didn't get all the questions right, next time focus on improving your score.

If you got them all correct - well done! Next time try to improve your time or choose a more tricky multiplication table.

Remember that you are racing against yourself. Don't worry about what your friends are doing!

Beat the Clock

Beat the Clock



Score: _____

Time: _____

x	3	4	8	5	10
4					
2					
6					
12					
3					
7					
1					
5					
11					
10					
9					
8					

My target for next time is _____

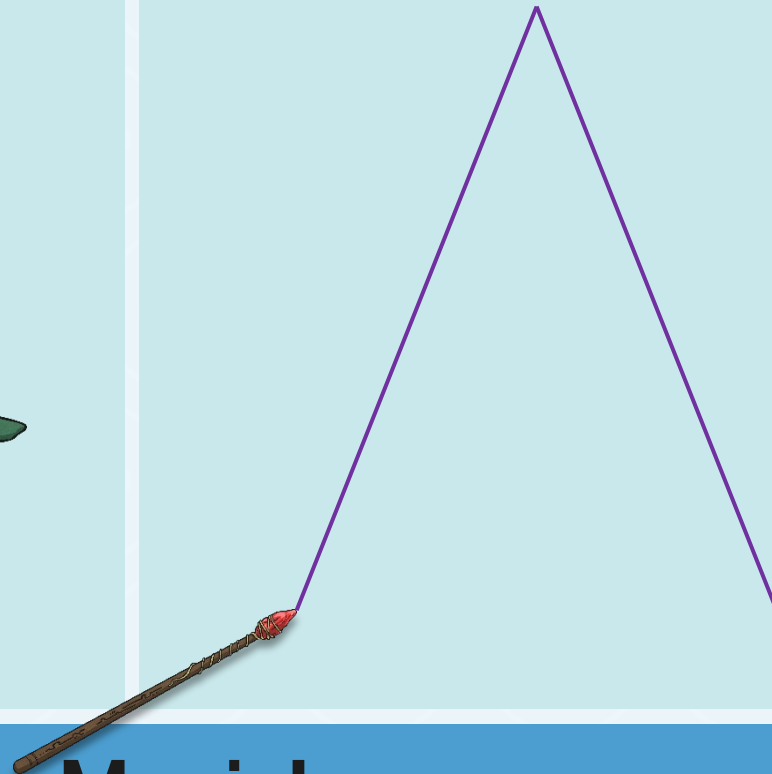
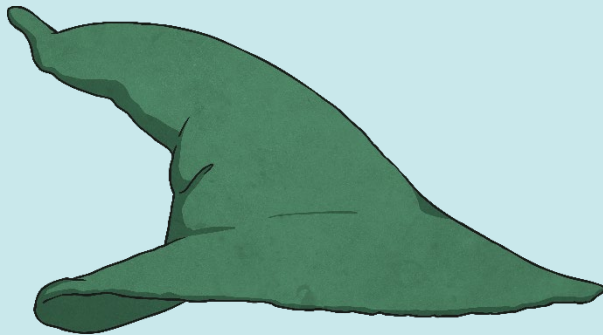


Multiplication Magic

Multiplication Magic is special trick that makes multiplying numbers in the $10\times$ table really easy.

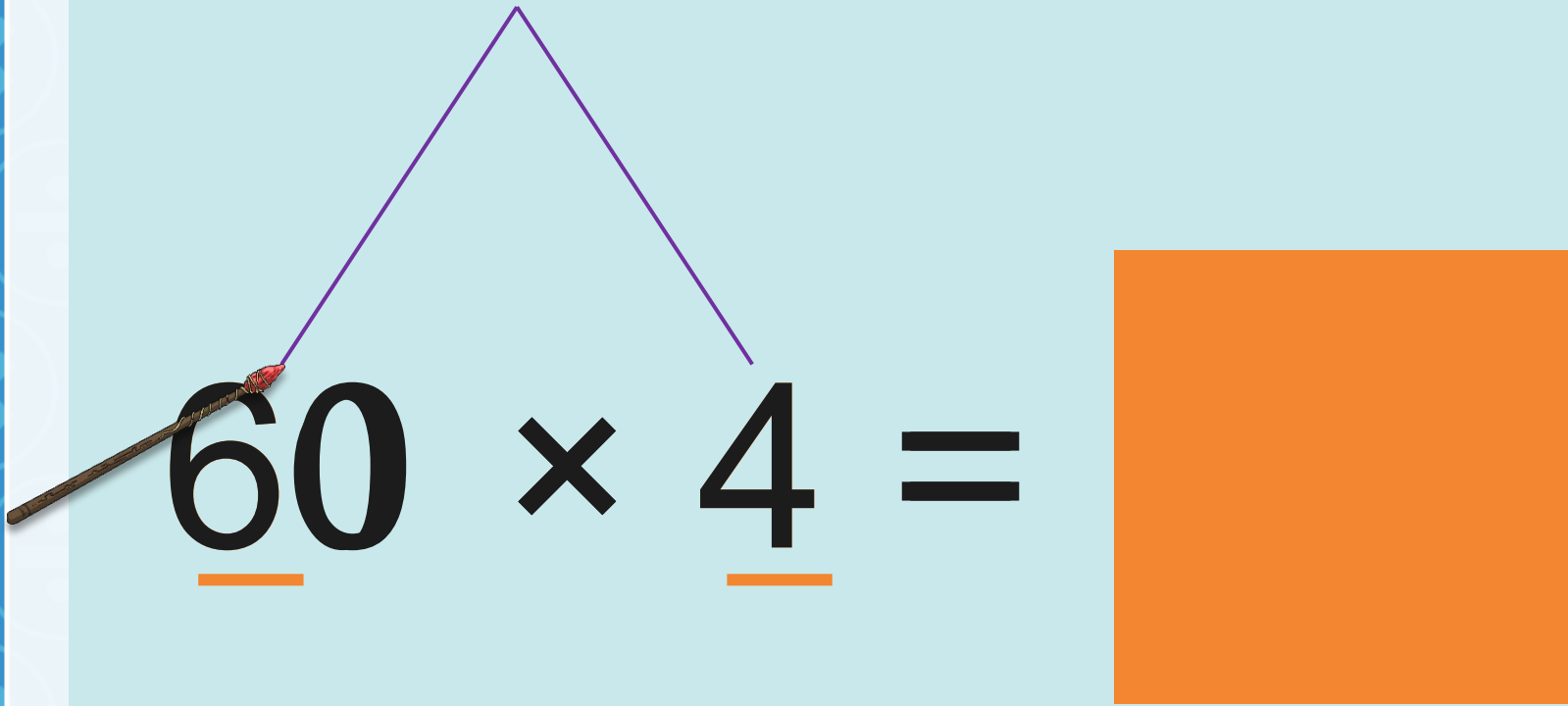


Draw the Hat to Find the Fact



It's Magic!

Multiplication Magic



Draw the wizard's hat to find the facts to calculate.

Multiplication Magic

$$\underline{6}0 \times \underline{4} = 6 \times 4 = 24$$

Use your multiplication facts to calculate.

Multiplication Magic

$$60 \times 4 =$$

If we know 6×4
..then we know
 $60 \times 4!$

Use your multiplication facts to calculate.

Multiplication Magic

$$\underline{6}0 \times \underline{4} =$$

$$\begin{array}{l} 6 \times 4 = 24 \\ 60 \times 4 = 240 \end{array}$$

How do we know this?

The Maths Behind the Magic

How does Multiplication Magic work?

$$40 \times 3 =$$

We look for the facts and ignore the tens, so we calculate:

$$4 \times 3 = 12$$

However, 4 really means 40, not 4. Therefore, we need to move the digits one place to the left and add a zero as a place holder.

$$\text{So } 40 \times 3 = 120$$

H	T	O
	1	2

Multiplication Magic

$$\underline{4}0 \times \underline{5} = 4 \times 5 = 20$$

When we calculate 4×5 , the answer already ends in a zero.

Does this change anything?

Multiplication Magic

$$\underline{40} \times \underline{5} =$$


$$\begin{array}{l} 4 \times 5 = 20 \\ 40 \times 5 = 200 \end{array}$$

$$\begin{array}{ccccccc} & & & & \text{H} & \text{T} & \text{O} \\ 40 & \times & 5 & = & 200 \end{array}$$

Now It's Your Turn To Use Multiplication Magic



Now you try :


 $50 \times 8 = ?$

$3 \times 60 = ?$

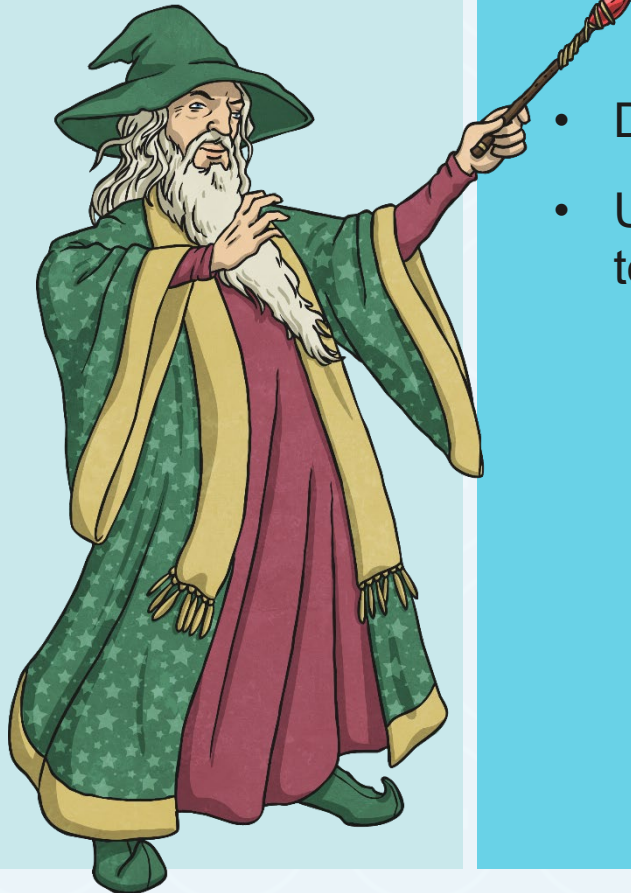
$70 \times 4 = ?$

Challenge:

$30 \times 40 = ?$

$20 \times 80 = ?$

$90 \times 30 = ?$



Remember

- Draw the wizard's hat.
- Use your multiplication facts to calculate.

$5 \times 8 = 40$

$50 \times 8 = 400$

$50 \times 80 = 4000$

$500 \times 80 = 40000$



Multiplication Magic Activity





 40×3


 30×4



 30×30


 $8 \times 60 =$ 

 80×4


 3×70



 3×100


 $30 \times 11 =$ 

 8×30


 90×8



 1×400

 $11 \times 4 =$ 

 20×3

 120×4

 6×30

 $30 \times 50 =$ 

What Is Multiplication Magic?



How do you use the Multiplication Method? Explain to your partner.



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