

# Warm-Up Challenge

Week 7 – Home Learning

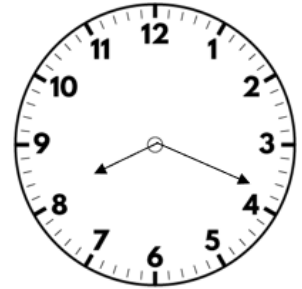
## Flashback 4

1) 10% of a number is 40. What is the number?

2) Work out 50% of 120?

3) Multiply 4.36 by 100

4) Work out  $\frac{3}{4} + \frac{3}{5}$



## Long multiplication

Solve  $54 \times 32$ .

First, multiply  $4 \times 2$ .

1.

$$\begin{array}{r} 54 \\ \times 32 \\ \hline 8 \end{array}$$

Multiply five 10s  $\times 2$ .

2.

$$\begin{array}{r} 54 \\ \times 32 \\ \hline \square 8 \end{array}$$

The 2 is in  
the 1s column.

## Long multiplication

Now multiply  $4 \times 3$  tens. Multiply  $5 \text{ tens} \times 3$  tens.

3.

$$\begin{array}{r} \overset{1}{5}4 \\ \times \quad 32 \\ \hline 108 \\ 20 \end{array}$$

4.

$$\begin{array}{r} \overset{1}{5}4 \\ \times \quad 32 \\ \hline 108 \\ \square 20 \end{array}$$

The 3 is in the  
10s column.

## Teaching Input:

Week 7 – Home Learning

### Long multiplication

Then add the products.

5.

$$\begin{array}{r} 154 \\ \times 32 \\ \hline 108 \\ 1620 \\ \hline 1728 \end{array}$$

Add  
 $108 + 1620$

So,  $54 \times 32 =$



## Long multiplication

Use long multiplication to solve the problem.


$$\begin{array}{r} 39 \\ \times 13 \\ \hline \end{array}$$

Multiply  $9 \times 3$ .  
Multiply 3 tens  $\times 3$ .

Multiply  $9 \times 1$  ten.  
Multiply 3 tens  $\times 1$  ten.

Then add the products.

So,  $39 \times 13 =$

## Long multiplication

Solve  $623 \times 25$ .

First, multiply  $3 \times 5$

1.

$$\begin{array}{r} \overset{1}{6} \overset{1}{2} 3 \\ \times \quad 25 \\ \hline \phantom{00} 5 \end{array}$$

Multiply 2 tens  $\times 5$

2.

$$\begin{array}{r} \overset{1}{6} \overset{1}{2} 3 \\ \times \quad 25 \\ \hline \phantom{00} 15 \end{array}$$

Multiply 6 hundreds  $\times 5$

3.

$$\begin{array}{r} \overset{1}{6} \overset{1}{2} 3 \\ \times \quad 25 \\ \hline \boxed{\phantom{00}} 15 \end{array}$$

## Long multiplication

Now multiply 3 × 2 tens   Multiply 2 tens × 2 tens   Multiply 6 hundreds × 2 tens

4.

$$\begin{array}{r} 623 \\ \times 25 \\ \hline 3115 \\ 60 \end{array}$$

5.

$$\begin{array}{r} 623 \\ \times 25 \\ \hline 3115 \\ 460 \end{array}$$

6.

$$\begin{array}{r} 623 \\ \times 25 \\ \hline 3115 \\ \boxed{\phantom{00}} 460 \end{array}$$

## Teaching Input:

Week 7 – Home Learning

### Long multiplication

Then add the products.

7.

$$\begin{array}{r} 623 \\ \times 25 \\ \hline 3115 \\ 12460 \\ \hline 15575 \end{array}$$


Add  
 $3115 + 12460$

So,  $623 \times 25 =$



## Long multiplication

Use long multiplication to solve the problem.


$$\begin{array}{r} 231 \\ \times 24 \\ \hline \end{array}$$

Multiply  $1 \times 4$

Multiply 3 tens  $\times 4$

Multiply 2 hundreds  $\times 4$

Multiply  $1 \times 2$  tens

Multiply 3 tens  $\times 2$  tens

Multiply 2 hundreds  $\times 2$  tens

So,  $231 \times 24 =$

## Practice time

1. Use long multiplication to solve the problems.

a)

$$\begin{array}{r} 27 \\ \times 18 \\ \hline \end{array}$$

b)

$$\begin{array}{r} 53 \\ \times 42 \\ \hline \end{array}$$


c)

$$\begin{array}{r} 465 \\ \times 34 \\ \hline \end{array}$$

## Practice time

2. Tickets to a theme park cost £27. The theme park sold 243 tickets. How much money was spent on tickets altogether? Use long multiplication to solve.

3. Wesley's work is shown on the right. What mistake has Wesley made?


$$\begin{array}{r} \phantom{0}^3 34 \\ \times \phantom{0} 28 \\ \hline 242 \\ 680 \\ \hline 922 \\ 1 \end{array}$$

**Independent Activity:** *Now grab a pen and paper and see how many questions you can answer*

1 Work out the multiplications.

a)  $6 \times 6$

$6 \times 60$

b)  $12 \times 8$

$12 \times 80$

c)  $32 \times 3$

$32 \times 30$

d)  $7 \times 9$

$7 \times 90$

e)  $21 \times 4$

$21 \times 40$

f)  $48 \times 3$

$48 \times 30$

How did you work out your answers?

2 Fill in the missing numbers.

a)

			4	3	
	x		1	3	
		1	2	9	
		4	3	0	

$(43 \times 3)$

$(43 \times 10)$

c)

	x				
		1	0	5	
		4	2	0	

$(21 \times 5)$

$(21 \times 20)$

b)

			2	1	
	x		1	6	
		1	2	6	
		2	1	0	

$(\square \times \square)$

$(\square \times \square)$



**Independent Activity:** Now grab a pen and paper and see how many questions you can answer

- 3 Brett is calculating  $216 \times 23$

$$\begin{array}{r} 216 \\ \times 23 \\ \hline 6480 \\ 432 \phantom{0} \\ \hline 6912 \end{array}$$

What mistake has Brett made?

What is the correct answer?

- 4 Work out the multiplications.

a)  $142 \times 31$       b)  $337 \times 46$       c)  $214 \times 53$       d)  $24 \times 183$

- 5 Some children are asked to work out  $308 \times 19$

a) Which is the best estimate to use to check their answers?

Work out the answer to your estimate.

$300 \times 10$        $300 \times 20$        $310 \times 20$        $300 \times 19$

b) Explain the reasons for your choice.

c) Here are answers given by three children.

Nijah 28,028      Filip 5,852      Whitney 2,080

From your estimate, who do you think is correct?

d) Work out the correct answer.

e) What mistakes might the others have made?

- 6 A football pitch is 128 m long and 52 m wide.

a) What is the area of the pitch?

b) A field is 25,000 m<sup>2</sup>.

How many football pitches could fit in it?

- 7 Write  $>$ ,  $<$  or  $=$  to complete each statement.

a)  $146 \times 64$        $164 \times 46$

$135 \times 53$        $153 \times 35$

b) What do you notice?

Does this always happen?

- 8 Miss Rose is ordering some pencils.

She orders 17 of pack A, 14 of pack B and 4 of pack C.

Pack A



Pack B



Pack C



How many pencils does Miss Rose order?

Each pencil costs 16p.

How much does Miss Rose spend on pencils?

**Mastery Challenge:** *Now lets see if we can really challenge that brain...*

Missing digits

$$\begin{array}{r} 25\square \\ \times \square 7 \\ \hline 1771 \\ 7590 \\ \hline 9361 \end{array}$$

Missing digits

$$\begin{array}{r} \square 15 \\ \times 6\square \\ \hline 3260 \\ 48900 \\ \hline 52160 \end{array}$$