

# Parent Forum Maths Meeting

## March 17

Addition / Subtraction (Decimals)

Multiplying and Dividing by powers of 10

Percentages

Multiplication

Division

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How do we teach the topics?

Have a go.....

Can you spot the errors?

# Addition

Calculate:  $492 + 879$

A handwritten addition problem is shown on a blue grid. The numbers 492 and 879 are stacked vertically. A thick black horizontal line is drawn under the 879. Below this line, the sum 1371 is written. A second thick black horizontal line is drawn under the 1371. Below this second line, the carry-over digits 1, 1, and 1 are written under the hundreds, tens, and ones columns respectively.

$$\begin{array}{r} 492 \\ 879 \\ \hline 1371 \\ \hline 1\ 1\ 1 \end{array}$$



# Subtraction

Calculate:  $935 - 479$

	8	12	1				
	<del>9</del>	<del>3</del>	5				
	4	7	9				
	<hr/>						
	4	5	6				
	<hr/>						



# Adding and subtracting decimals



1.7

4

2

4

4

4.5

6

2

4.2

+



# Multiplying and Dividing by powers of 10

The common misconception when  
multiplying by 10 is to.....

“Just put a nought on the end”



# Multiplying

$$7 \times 10 = 70$$

$$7 \times 100 = 700$$

$$7 \times 1\,000 = 7\,000$$

# Multiply by 10

H	T	U	.	t	h	th
		7	.			

X 10

H	T	U	.	t	h	th
		0	.			

# Multiply by 100

H	T	U	.	t	h	th
		7	.			

X 100

H	T	U	.	t	h	th
	0	0	.			

# Dividing

$$800 \div 100 = 8$$

$$800 \div 10 = 80$$

$$800 \div 1 = 800$$

# Dividing by 10

H	T	U	.	t	h	th
8	0	0	.			

÷ 10

H	T	U	.	t	h	th
			.			

# Dividing by 100

H	T	U	.	t	h	th
8	0	0	.			

÷ 100

H	T	U	.	t	h	th
			.			

# Multiply by 10

H	T	U	.	t	h	th
	5	3	.	9		

X 10

H	T	U	.	t	h	th
			.			

# Multiply by 10

H	T	U	.	t	h	th
	7	2	.	1	8	

X 10

H	T	U	.	t	h	th
			.			



# Multiply by 10

H	T	U	.	t	h	th
		0	.	3	7	

X 10

H	T	U	.	t	h	th
			.			

# Multiply by 10

H	T	U	.	t	h	th
		0	.	0	7	3

X 10

H	T	U	.	t	h	th
			.			

# Multiply by 100

H	T	U	.	t	h	th
		6	.	4		

X 100

H	T	U	.	t	h	th
		0	.			

# Multiply by 100

H	T	U	.	t	h	th
		0	.	5		

X 100

H	T	U	.	t	h	th
		0	.			

# Multiply by 100

H	T	U	.	t	h	th
		6	.	4	0	1

X 100

H	T	U	.	t	h	th
			.			

# Dividing by 10

H	T	U	.	t	h	th
	5	3	.	9		

÷ 10

H	T	U	.	t	h	th
			.			

# Dividing by 10

H	T	U	.	t	h	th
	7	2	.	1	8	

÷ 10

H	T	U	.	t	h	th
			.			

# Dividing by 10

H	T	U	.	t	h	th
		0	.	3	7	

÷ 10

H	T	U	.	t	h	th
		0	.			



# Dividing by 10

H	T	U	.	t	h	th
		0	.	7	3	

÷ 10

H	T	U	.	t	h	th
		0	.			

# Dividing by 100

H	T	U	.	t	h	th
		6	.	4		

÷ 100

H	T	U	.	t	h	th
		0	.	0		

# Dividing by 100

H	T	U	.	t	h	th
		0	.	5		

÷ 100

H	T	U	.	t	h	th
		0	.	0		

# Dividing by 100

H	T	U	.	t	h	th
6	4	0	.	1		

÷ 100

H	T	U	.	t	h	th
			.			

# Percentages

To find 10%

Divide by 10 (Ten 10s in 100%)

To find 50%

Divide by 2 (Two 50s in 100%)

To find 20%

Divide by 5 (Five 20s in 100%)

To find 1%

Divide by 100 (Hundred 1s in 100%)

# Percentages

To find 10%  
Divide by 10 (Ten 10s in 100%)

To find 1%  
Divide by 100 (Hundred 1s in 100%)

# Percentages

Find 35% of 240

<b>10%</b>	<b>20%</b>	<b>5%</b>	<b>35%</b>
24	48	12	84

$35\% \text{ of } 240 = 84$

# Percentages

Find 17% of 360

<b>10%</b>	<b>5%</b>	<b>1%</b>	<b>1%</b>	<b>17%</b>
36	18	3.6	3.6	61.2

$$17\% \text{ of } 360 = 61.2$$



# Multiplying

$$2 \times 4 = 8$$

$$20 \times 4 = 80$$

$$20 \times 40 = 800$$

$$200 \times 40 = 8\ 000$$

$$200 \times 400 = 80\ 000$$

# Multiplying – KS2 (Yr 5 & 6)

$$42 \times 23$$

$$\begin{array}{r} \text{t} \quad \text{u} \\ 42 \\ 23 \\ \hline 126 \\ 840 \\ \hline 966 \end{array}$$

# Multiplication

Solve the following:  $38 \times 42$

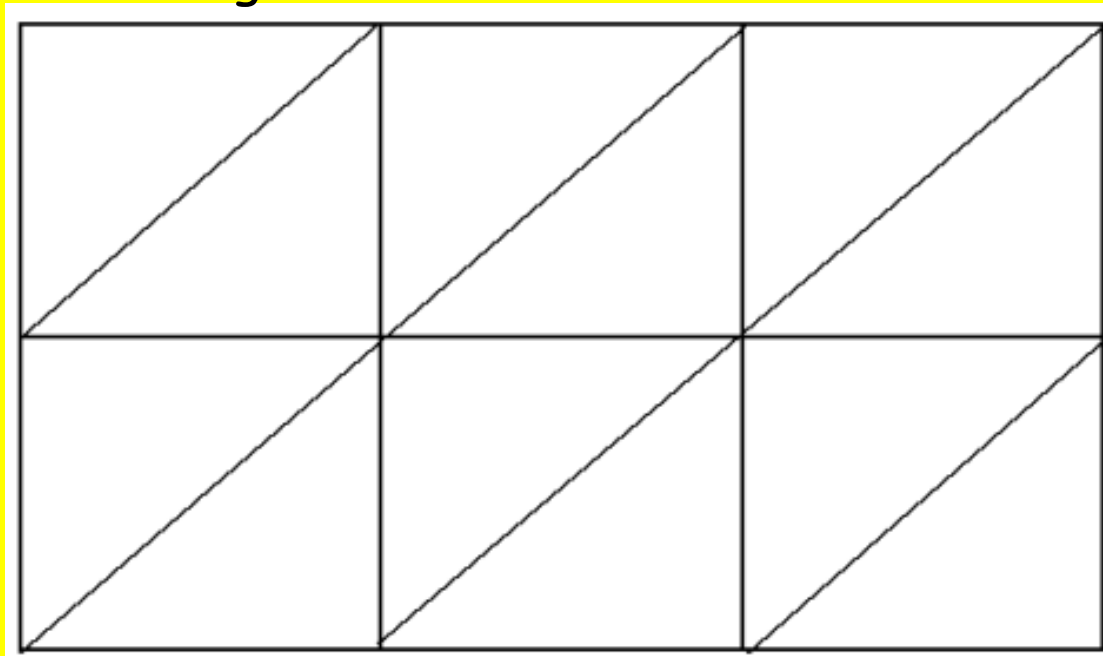
x	30	8
40	1200	320
2	60	16

$$\begin{array}{r} 1200 \\ 320 \\ 60 \\ 16 \\ \hline 1596 \end{array}$$

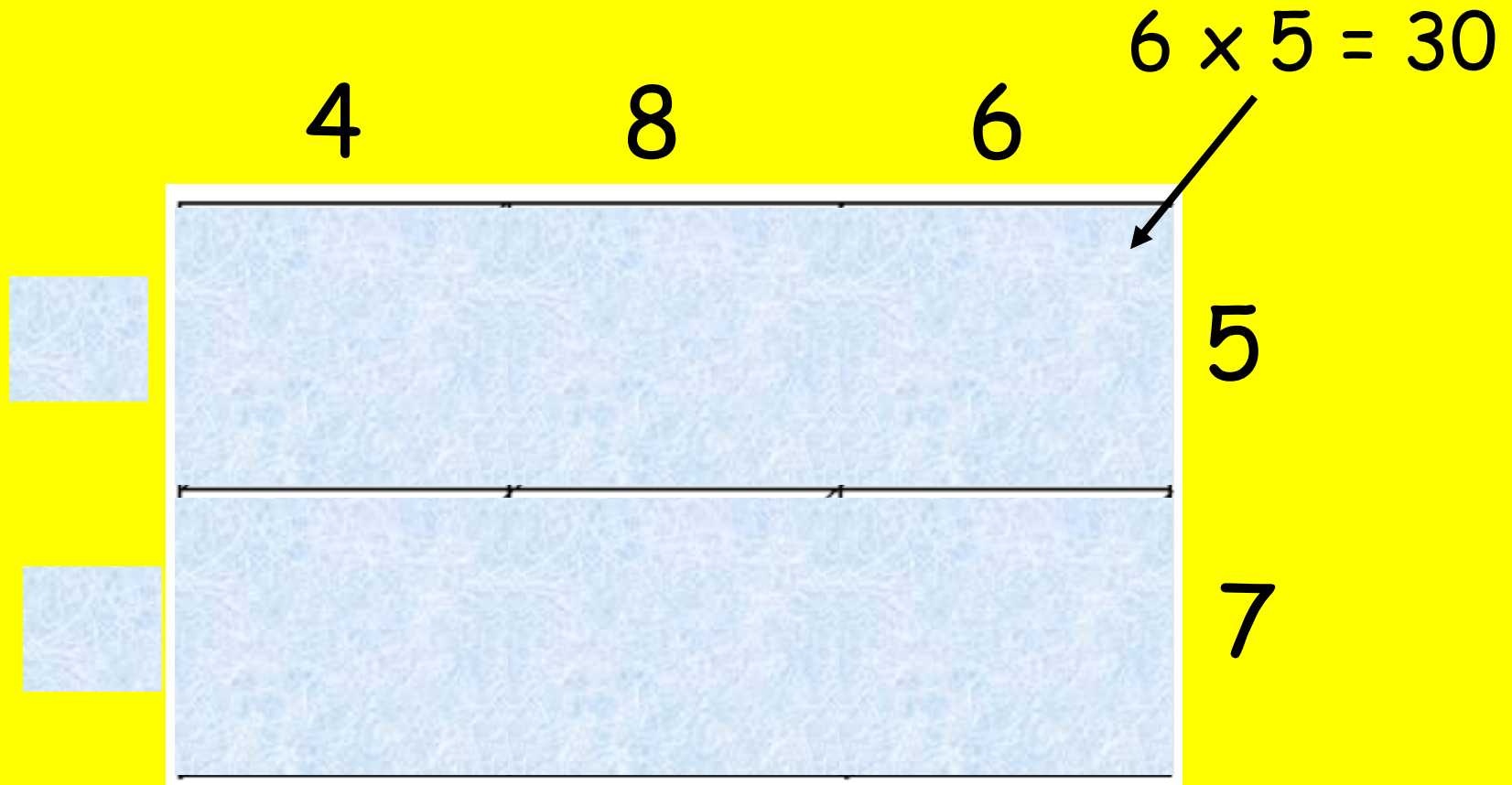
# Multiplication – KS3 (Yr 7 & 8)

Example: Work out the answer to  $486 \times 57$

The grid method uses a diagram like this one



# Multiplication – KS3 (Yr 7 & 8)



$$6 \times 5 = 30$$

4

8

6

5

7

$$\underline{486 \times 57 = 27702}$$

# Division

Solve the following:  $216 \div 3$

$$\begin{array}{r} 072 \\ 3 \overline{) 216} \\ \underline{21} \phantom{6} \\ 0 \phantom{6} \\ 0 \phantom{6} \end{array}$$

3

6

9

12

15

18

21

24

27

30

# Division - Chunking

Solve the following:  $135 \div 9$

$$\begin{array}{r} 9 \overline{) 135} \\ \underline{90} \phantom{0} \\ 45 \\ \underline{45} \\ 00 \end{array}$$

$$9 \times 10 = 90$$

$$9 \times 5 = 45$$

$$135 \div 9 = 15$$

Solve the following:  $597 \div 22$

$$\begin{array}{r} 22 \overline{) 597} \\ \underline{220} \phantom{0} \\ 377 \\ \underline{220} \phantom{0} \\ 157 \\ \underline{110} \phantom{0} \\ 047 \\ \underline{044} \phantom{0} \\ 003 \end{array}$$

$$22 \times 10 = 220$$

$$22 \times 10 = 220$$

$$22 \times 5 = 110$$

$$22 \times 2 = 44$$

$$597 \div 22 = 27 \text{ r } 3$$



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On behalf of the Maths department,  
thank you for attending and participating!!!!

Any questions?????