

Year 4

Visual calculation  
methods

# Mental Addition

# MA1: Partitioning

4

$$648 + 231 = 879$$

$$800 + 70 + 9 = 879$$



# MA4: Double & Adjust

$$125 + 127 = 252$$

$$125 + 125 + 2$$

$$250 + 2 = 252$$



*Addition*

# A7: Column Addition

$$\begin{array}{r} \text{100} \quad \text{10} \quad \text{1} \\ \text{687} \\ + \text{248} \\ \hline \text{935} \\ \hline \text{1} \quad \text{1} \end{array}$$



# A7d: Column Addition

$$\begin{array}{r} 4873 \\ + 3762 \\ \hline 8635 \\ \hline \end{array}$$

1 1



# Mental Subtraction

# MS2a: Counting On

$$75 - 47 = 28$$



# MS3: Round & Adjust

$$84 - 29 = 55$$

$$84 - 30 + 1$$

$$54 + 1 = 55$$



*Subtraction*

# (S11: Column Subtraction)

Additional

$$\begin{array}{r} \text{10} \quad \text{1} \\ 675 \\ - 37 \\ \hline 38 \end{array}$$



# (S11: Column Subtraction)

Additional: b

	100	10	1
	0	12	1
	<del>1</del>	<del>3</del>	2
-		5	6
<hr/>			
	7	6	
<hr/>			



# S11d: Column Subtraction

$$\begin{array}{r} \overset{4}{\cancel{5}} \overset{19}{\cancel{0}} \overset{13}{\cancel{4}} \overset{1}{2} \\ - 1776 \\ \hline 3266 \end{array}$$



# Mental Multiplication

# MM5c: Doubling

$$\text{Double } 340 = 680$$


$$600 + 80 = 680$$



# MM5d: Doubling

$$\text{Double } 480 = 960$$


$$800 + 160 = 960$$



### 12 X 12 Multiplication Table

X	0	1	2	3	4	5	6	7	8	9	10	11	12
0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0	1	2	3	4	5	6	7	8	9	10	11	12
2	0	2	4	6	8	10	12	14	16	18	20	22	24
3	0	3	6	9	12	15	18	21	24	27	30	33	36
4	0	4	8	12	16	20	24	28	32	36	40	44	48
5	0	5	10	15	20	25	30	35	40	45	50	55	60
6	0	6	12	18	24	30	36	42	48	54	60	66	72
7	0	7	14	21	28	35	42	49	56	63	70	77	84
8	0	8	16	24	32	40	48	56	64	72	80	88	96
9	0	9	18	27	36	45	54	63	72	81	90	99	108
10	0	10	20	30	40	50	60	70	80	90	100	110	120
11	0	11	22	33	44	55	66	77	88	99	110	121	132
12	0	12	24	36	48	60	72	84	96	108	120	132	144

*Multiplication*

# M5b: Grid Method

Short Multiplication

$$147 \times 4 = 588$$

<b>x</b>	<b>100</b>	<b>40</b>	<b>7</b>
<b>4</b>	<b>400</b>	<b>160</b>	<b>28</b>

$$400 + 160 + 28 = 588$$



# (M7: Column Multiplication)

Additional

$$\begin{array}{r} \phantom{0}10 \phantom{0}1 \\ 15 \\ \times \phantom{0}5 \\ \hline 75 \\ \hline 2 \end{array}$$



# (M7: Column Multiplication)

Additions

	100	10	1
		4	3
x			6
<hr/>			
	2	5	8
<hr/>			
		1	



*Division*

# (D10: Short Division)

Additional

$$72 \div 4 = 18$$

$$\begin{array}{r} 18 \\ 4 \overline{) 72} \end{array}$$



# (D10: Short Division)

Additional:

$$65 \div 4 = 16r1$$

$$\begin{array}{r} 16r1 \\ \hline 4 \overline{) 6^2 5} \end{array}$$



# D10c: Short Division

$$394 \div 6 = 65r4$$

$$\begin{array}{r} 65r4 \\ 6 \overline{) 394} \end{array}$$

