

Year 5

Visual calculation
methods

Mental Addition

MA1: Partitioning

5

$$576 + 258 = 834$$

$$700 + 120 + 14 = 834$$



MA4: Double & Adjust

$$125 + 127 = 252$$

$$125 + 125 + 2$$

$$250 + 2 = 252$$



MA5: Round & Adjust

5

$$4645 + 1996 = 6641$$

$$4645 + 2000 - 4$$

$$6645 - 4 = 6641$$



Addition

A7d: Column Addition

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

1 1



A7e: Column Addition

$$\begin{array}{r} 787567 \\ + 446278 \\ \hline 1233845 \\ \hline 1 \quad 1 \quad 1 \quad \quad 1 \quad 1 \end{array}$$



A7f: Column Addition

$$\begin{array}{r} \phantom{\frac{1}{10}} \\ 4.8 \\ + 3.8 \\ \hline 8.6 \\ \hline \end{array}$$



A7g: Column Addition

$$\begin{array}{r} \begin{array}{cccc} & 1 & \cdot & \frac{1}{10} & \frac{1}{100} \\ 5 & . & 6 & 5 \\ + & 3 & . & 2 & 9 \\ \hline 8 & . & 9 & 4 \\ \hline & & & & 1 \end{array} \end{array}$$



Mental Subtraction

MS1: Counting Back

$$46 - 21 = 25$$



MS2: Counting On

$$75 - 47 = 28$$



MS3: Round & Adjust

$$84 - 29 = 55$$

$$84 - 30 + 1$$

$$54 + 1 = 55$$



Subtraction

S11d: Column Subtraction

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



S11f: Column Subtraction

$$\begin{array}{r} \begin{array}{c} 10 \quad 1 \quad = \quad \frac{1}{10} \\ 0 \quad 12 \quad 1 \\ \cancel{1} \quad \cancel{3} \quad 4 \\ - \quad 8 \quad 7 \\ \hline 4 \quad 7 \end{array} \end{array}$$



S11g: Column Subtraction

$$\begin{array}{r} \text{10} \quad \text{1} \quad \text{=} \quad \frac{1}{10} \quad \frac{1}{100} \\ \begin{array}{r} \overset{6}{\cancel{7}} \overset{11}{\cancel{2}} \overset{13}{\cancel{4}} \overset{1}{3} \\ - \quad 47.85 \\ \hline 24.58 \end{array} \end{array}$$



Mental Multiplication

MM3a: Partitioning

$$37 \times 4 = 148$$

$$\begin{array}{c} \text{120} \\ \text{(30} \times \text{4)} \end{array} + \begin{array}{c} \text{28} \\ \text{(7} \times \text{4)} \end{array} = 148$$



MM4a: Round & Adjust

$$198 \times 4 = 792$$

$$(200 \times 4) - (2 \times 4)$$

$$800 - 8 = 792$$



MM5f: Doubling

$$\text{Double } 768 = 1536$$


$$1400 + 120 + 16 = 1536$$



MM7a: Doubling Up

$$36 \times 8 = 112$$

$$\text{Double } 36 = 72 \quad (36 \times 2)$$

$$\text{Double } 72 = 144 \quad (36 \times 4)$$

$$\text{Double } 144 = 288 \quad (36 \times 8)$$



Multiplication

M7a: Column Multiplication

$$\begin{array}{r} 3647 \\ \times \quad 4 \\ \hline 14588 \\ \hline 212 \end{array}$$



M9c: Column Multiplication

$$\begin{array}{r} \text{10} \quad \text{1} \quad \text{=} \quad \frac{\text{1}}{\text{10}} \\ 3.6 \\ \times 4 \\ \hline 14.4 \\ \hline 2 \end{array}$$



Division

D10c: Short Division

$$394 \div 6 = 65r4$$

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



D10d: Short Division

$$591 \div 3 = 197$$

$$\begin{array}{r} 197 \\ 3 \overline{) 591} \end{array}$$



D10c: Short Division

$$394 \div 6 = 65r4$$

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

