

## Calculating

Estimate the answer to a calculation and use inverse operations to check answers

What calculation could you use to estimate:

$$72 + 63 = \quad \quad \quad 70 + 60$$

$$47 - 18 = \quad \quad \quad 50 - 20$$

What calculation would you use to check:

$$82 - 45 = 37 \quad \quad \quad 37 + 45 =$$

## Number Facts

Recall and use multiplication and division facts for the three and four multiplication tables

$$8 \times 3 = \quad \quad \quad 32 \div 4 =$$

$$6 \times 4 = \quad \quad \quad 27 \div 3 =$$

$$7 \times 3 = \quad \quad \quad 48 \div 4 =$$

$$8 \times 4 = \quad \quad \quad 24 \div 4 =$$

$$4 \times 9 = \quad \quad \quad 18 \div 3 =$$

# Calculation Mat

## Working towards Year 3

### Solve Problems

Solve problems, including missing number problems, using number facts and place value

Complete the calculation:  $\_1 + 3\_ = 57$   
 $21 + 36$

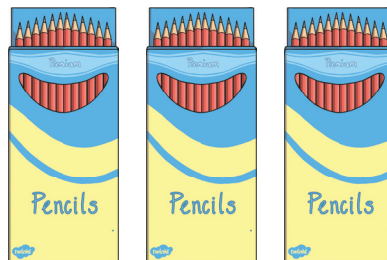
A number has two digits and is a multiple of five. All the digits are odd and the total of the digits is nine. What could the number be?

45

Solve problems, including missing number problems, involving multiplication and division

Complete the calculation:  $\_ \times 5 = 45$   
 $9 \times 5 = 45$

Three boxes of pencils contain 36 pencils. How many pencils will there be in each box?



## Methods

Add and subtract numbers with support of models or images, including:

- a three-digit number and ones
- a three-digit number and tens
- a three-digit number and hundreds;

$$134 + 3 = \quad \quad \quad 276 - 5 =$$

$$246 + 30 = \quad \quad \quad 128 - 40 =$$

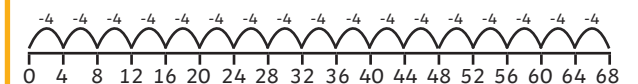
$$509 + 300 = \quad \quad \quad 641 - 200 =$$

Add and subtract numbers with up to three digits, using simple formal written methods of columnar addition and subtraction

$$\begin{array}{r} 424 \\ + 63 \\ \hline 587 \end{array} \quad \quad \quad \begin{array}{r} 197 \\ - 44 \\ \hline 153 \end{array}$$

Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using the support of models and images

$$68 \div 4 =$$



## Calculating

Estimate the answer to a calculation and use inverse operations to check answers

Which calculation could you use to estimate:

$$292 + 163 =$$

$$300 + 150 \text{ or } 300 + 160$$

$$207 - 87 =$$

$$200 - 80 \text{ or } 210 - 90$$

Which calculation would you use to check:

$$382 - 45 = 337$$

$$337 + 45 =$$

## Number Facts

Recall and use multiplication and division facts for the three and four and eight multiplication tables

$$8 \times 3 =$$

$$32 \div 4 =$$

$$6 \times 4 =$$

$$27 \div 3 =$$

$$7 \times 3 =$$

$$48 \div 8 =$$

$$8 \times 8 =$$

$$24 \div 4 =$$

$$4 \times 9 =$$

$$72 \div 8 =$$

# Calculation Mat

## Expected Year 3

### Solve Problems

Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction

Complete the calculation:  $2\_1 + \_37 = 41\_$

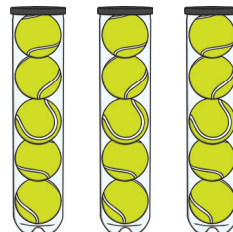
A number has three digits and is a multiple of five. All the digits are odd and the total of the digits is nine. What could be the number?

135 or 315

Solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which  $n$  objects are connected to  $m$  objects

Complete the calculation:  $\_7 \times 5 = 18\_$

Three boxes contain 15 tennis balls. How many balls will there be in two boxes?



## Methods

Add and subtract numbers mentally, including:

- a three-digit number and ones
- a three-digit number and tens
- a three-digit number and hundreds;

$$134 + 3 =$$

$$276 - 5 =$$

$$246 + 30 =$$

$$128 - 40 =$$

$$509 + 300 =$$

$$641 - 200 =$$

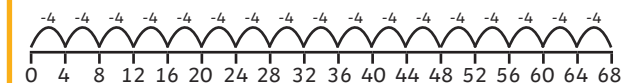
Add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction

$$\begin{array}{r} 484 \\ + 67 \\ \hline 551 \end{array}$$

$$\begin{array}{r} 1817 \\ - 48 \\ \hline 149 \end{array}$$

Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods

$$68 \div 4 =$$



## Calculating

**Estimate the answer to a calculation and use inverse operations to check answers**

Explain why you might use  $300 + 150$  as an estimate of  $292 + 163 =$

What would you use to estimate  $207 - 87 =$  and explain your reasoning.

Explain with an example why you can use an inverse calculation to check a subtraction.

## Number Facts

**Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables**

$$8 \times 30 = \quad 320 \div 4 =$$

$$60 \times 4 = \quad 27 \div 3 =$$

$$7 \times 300 = \quad 480 \div 80 =$$

$$80 \times 80 = \quad 2400 \div 4 =$$

$$400 \times 9 = \quad 720 \div 8 =$$

# Calculation Mat

## Greater Depth Year 3

### Solve Problems

**Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction**

Complete the calculation:  $\_1\_ + 3\_7 = 4\_$

A number has three digits, is greater than 500 and is a multiple of three. All the digits are even, none repeat and there are no 0s. The number of hundreds is equal to the number of tens and ones. What could be the number?

**624 or 642**

**Solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which  $n$  objects are connected to  $m$  objects**

Complete the calculation, writing an explanation of how you found the missing digits:

$$\_7 \times 8 = 29\_$$

Seven bags of apples contain 56 apples. How many apples will there be in three bags of apples?

## Methods

**Add and subtract numbers mentally, including:**

- a three-digit number and ones
- a three-digit number and tens
- a three-digit number and hundreds;

Count forwards or backwards fluently from any three-digit number in ones, tens or hundreds

**Add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction**

Write an explanation of columnar addition or subtraction using an example.

**Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and formal written methods**

$$85 \times 6 =$$

$$80 \times 6 = 480$$

$$\begin{array}{r} 3 \\ 85 \\ \times 6 \\ \hline 510 \end{array}$$

