

Welcome to the Arithmetic workshop



Aims of the session

- Explain what arithmetic means
- Show you the format of an Arithmetic paper
- Show you the different methods to complete the questions
- Multiplication, division, addition, subtraction, fractions and percentages of amounts
- To have a go

What is *arithmetic*?

Arithmetic is a branch of mathematics that consists of the study of numbers.

It studies how the traditional operations work on numbers.

(addition, subtraction, multiplication and division).

Arithmetic paper

- 30 minutes
- Roughly 36 questions
- A range of different operations used
- Mainly 1 mark answers but can be 2 – *showing working out*

Mental methods

1 $987 + 100 =$

1 mark

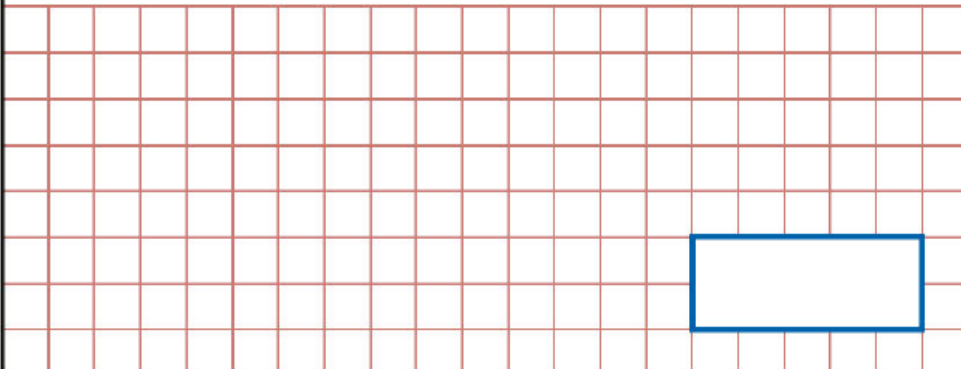
Look at
place value

2 $46 + 304 =$

1 mark

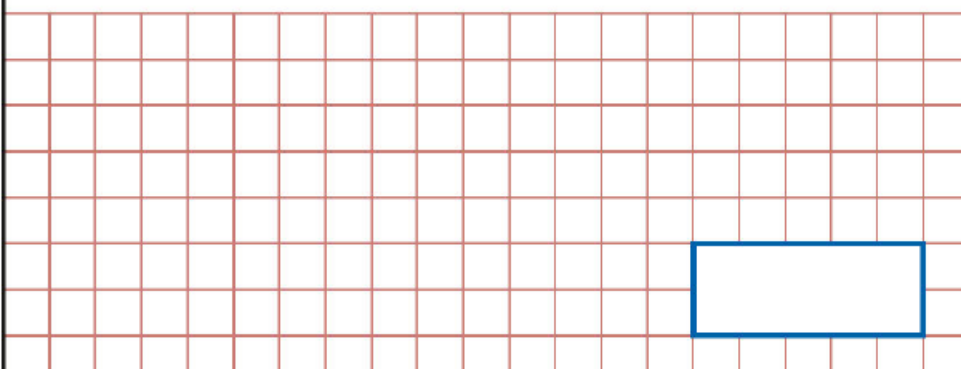
Look at
known
number
facts

13 $100 \times 412 =$



1 mark

20 $0.9 \div 10 =$



1 mark

Multiplying or
dividing by 10,
100, 1000

Have a go

1. $18 \times 10 =$

2. $180 \div 100 =$

3. $327 + 13 =$

4. $100 + 562 =$

5. $6.72 \times 100 =$

6. $6.72 \div 100 =$

Have a go

1. $18 \times 10 = 180$

2. $180 \div 100 = 1.8$

3. $327 + 13 = 340$

4. $100 + 562 = 662$

5. $6.72 \times 100 = 672$

6. $6.72 \div 100 = 0.0672$

Multiplying

$$50 \times 70 =$$



Using known
facts

Now try

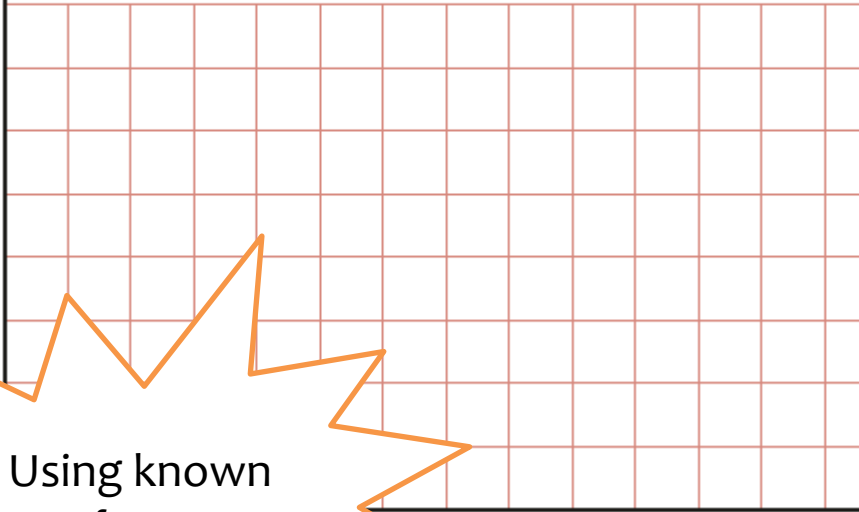
$$20 \times 40 =$$

$$300 \times 200 =$$

$$0.5 \times 0.3 =$$

Multiplying

$$50 \times 70 =$$



Using known
facts

ANSWERS

$$20 \times 40 = 800$$

$$300 \times 200 = 60,000$$

$$0.5 \times 0.3 = 0.15$$

23

$$\begin{array}{r} \times \quad 71 \\ \hline 46 \end{array}$$

Show
your
method

Now try

$$45 \times 32 =$$

2 marks

23

$$\begin{array}{r} \times \quad 71 \\ \hline 46 \end{array}$$

Show
your
method

ANSWER

$$45 \times 32 = 1,440$$



2 marks

Dividing using number friendly boxes *

28	2 9 7 2 5	
Show your method		<input type="checkbox"/>
		2 marks

Now try

$$770 \div 14 =$$

Number friendly boxes

- 1- x 1
- 2- double x1
- 4- double x2
- 8- double x4
- 10 – x10
- 5- half x10
- 3- add x1 and x2
- 6- double x3
- 7- add on one more to x6
- 9- add on one more to x8

Dividing using number friendly boxes *

28	2 9 7 2 5	<input type="checkbox"/> 2 marks
Show your method		

ANSWER

$$770 \div 14 = 55$$

Number friendly boxes

- 1- x 1
- 2- double x1
- 4- double x2
- 8- double x4
- 10 – x10
- 5- half x10
- 3- add x1 and x2
- 6- double x3
- 7- add on one more to x6
- 9-add on one more to x8

Finding % of amounts

29

$$15\% \times 440 =$$

Now try

15 % of 260

1 mark

1. Find 10% and 5 % and add it together to make the % of amount
2. Find 1% and multiply by %

Finding % of amounts

29

$$15\% \times 440 =$$

ANSWER

$$15\% \text{ of } 260 = \\ 39$$

1 mark

1. Find 10% and 5% and add it together to make the % of amount
2. Find 1% and multiply by %