

	Job position	Favourite subject	Glasses	Hair colour	
Mr Arithmetic	Head teacher	English	Yes	Brown	
Mrs Backpack	Cleaner	Maths	Yes	Blonde	
Miss Bookcase	Teacher	Maths	No	Brown	
Mr Calculator	Teaching assistant	History	No	Grey	
Miss Compass	Teacher	Geography	Yes	Grey	
Miss Crayon	Teacher	Maths	Yes	Brown	
Mr Dictionary	Cleaner	English	No	Black	
Mrs English	Cleaner	Maths	No	Blonde	
Mrs Exam	Teacher	Maths	No	Blonde	
Mr Folder	Teaching assistant	Maths	Yes	Black	
Miss Glue	Teaching assistant	History	Yes	Black	
Miss History	Teacher	History	No	Grey	
Mrs Lesson	Cleaner	English	No	Brown	
Mrs Math	Teaching assistant	Maths	Yes	Brown	
Miss Notebook	Cleaner	Maths	Yes	Grey	
Miss Paper	Teacher	Maths	No	Black	
Mr Pencil	Teaching assistant	Geography	No	Blonde	
Mr Protractor	Teaching assistant	History	No	Black	
Mrs Quiz	Teacher	Maths	Yes	Grey	
Mrs Ruler	Teacher	Maths	No	Brown	
Mr Science	Cleaner	English	No	Grey	
Miss Scissors	Teaching assistant	Geography	Yes	Blonde	
Mrs Tape	Teaching assistant	History	Yes	Black	
Mr Thesaurus	Teacher	Maths	No	Grey	
Miss Whiteboard	Cleaner	Maths	No	Brown	
Miss Writing	Teacher	History	Yes	Blonde	

**Record the clues that were found.**

Clue 1: \_\_\_\_\_

Clue 2: \_\_\_\_\_

Clue 3: \_\_\_\_\_

Clue 4: \_\_\_\_\_

The murderer is \_\_\_\_\_

Remember for all clues: a = 1, b = 2, c = 3, d = 4, e = 5 ect.

## Clue 1

Solve the number sentences using long multiplication and long division.  
The last two digits in your answer, will correspond to the correct letter.

eg.  $4\,255 \times 22 = 93\,610$      $10 = J$

$$11 \times 1\,591 =$$

$$8\,208 \div 16 =$$

$$368 \div 23 =$$

$$31 \times 2471 =$$

$$19 \times 1411 =$$

$$6\,120 \div 51 =$$

$$1\,596 \div 14 =$$

$$11 \times 1328 =$$

$$7 \times 8\,117 =$$

$$3\,451 \div 29 =$$

$$6\,231 \div 31 =$$

$$1\,285 \times 25 =$$

$$5\,562 \div 18 =$$

$$7\,519 \times 6 =$$

$$6\,206 \div 58 =$$

$$3 \times 4\,103 =$$

$$1\,128 \div 94 =$$

$$5 \times 9\,043 =$$

$$7\,548 \div 34 =$$

$$1\,303 \times 35 =$$

## Clue 2

**Identify the numbers stated in the positions. These two numbers are joined together to give you a letter.**

*eg.* 6 821 076 (ten thousands and hundreds) = 20 = T

9 301 268 (ten thousands and thousands)

3 128 169 (hundred thousand and tens)

6 093 126 (hundred thousands and hundreds)

620 009 (hundreds and ones)

512 083 (ten thousands and tens)

7 155 698 (hundred thousands and thousands)

3 902 396 (ten thousands and ones)

8 091 071 (hundreds and tens)

1 368 219 (millions and hundreds)

4 942 001 (hundreds and ones)

1 111 993 (millions and tens)

2 631 329 (thousands and ones)

306 521 (ten thousands and hundreds)

1 592 916 (millions and hundreds)

## Clue 3

Solve the number sentences using BIDMAS. The last two digits in your answer, will correspond to the correct letter.

eg.  $(3 + 4) \times 3 = 21 = U$

$$2^2 - (21 \div 7) =$$

$$(4^2 + 5^2) + 68 =$$

$$3 \times 2 + (5 \times 2) =$$

$$100 \div 2 - 32 =$$

$$(16 + 38) \div 6 =$$

$$7^2 - 11 \times 4 =$$

$$22 \div (7 + 4) + 1 =$$

$$(3 + 4) \times 2 - 9 =$$

$$(7 \times 4) - (4^2 - 3) =$$

$$11^2 \times 2 - 36 =$$

$$13 \times (31 + 6) + 21 =$$

$$36 \times 24 + 154 =$$

$$15^2 - 10 =$$

$$(72 - 3) \div 3 =$$

$$6291 \times 3 - 11159 =$$

$$(303 - 101) \times 4 =$$

$$(15\,261 - 14\,958) \div 3 =$$

## Clue 4

**Solve the equations to give you a number that will correspond to the alphabet.**

eg.  $2a - 8 = 12$       $a = 10$       $10 = J$

$$a + 6 = 7$$

$$2a - 28 = 10$$

$$684 - a = 671$$

$$5a + 45 = 50$$

$$a + a = 38$$

$$8a = 64$$

$$584 - 3a = 569$$

$$6a - 20 = 4$$

$$a + 24 = 26$$

$$3a \times 6 = 90$$

$$a - 8 = 11$$

$$10a + 296 = 496$$

$$30 - a = 10$$

$$8a = 40$$

$$a - 84 = -83$$

$$3a + 33 = 42$$

$$225 - a = 217$$

$$6a + 15 = 45$$

$$a - 20 = -2$$

$$2a + 32 = 58$$

$$a \div 7 = 3$$

$$a^2 = 49$$

## Clue 1

Solve the number sentences using long multiplication and long division. The last two digits in your answer, will correspond to the correct letter.

eg.  $4\,255 \times 22 = 93\,610$     10 = J

$$11 \times 1\,591 = 17501 \quad \text{A}$$

$$368 \div 23 = 16 \quad \text{P}$$

$$19 \times 1\,411 = 26809 \quad \text{I}$$

$$1\,596 \div 14 = 114 \quad \text{N}$$

$$7 \times 8\,117 = 56819 \quad \text{S}$$

$$6\,231 \div 31 = 201 \quad \text{A}$$

$$1\,285 \times 25 = 32125 \quad \text{Y}$$

$$5\,562 \div 18 = 309 \quad \text{I}$$

$$7\,519 \times 6 = 45114 \quad \text{N}$$

$$6\,206 \div 58 = 107 \quad \text{G}$$

$$3 \times 4\,103 = 12309 \quad \text{I}$$

$$1\,128 \div 94 = 12 \quad \text{L}$$

$$5 \times 9\,043 = 45215 \quad \text{O}$$

$$7\,548 \div 34 = 222 \quad \text{V}$$

$$1\,303 \times 35 = 45605 \quad \text{E}$$

$$8\,208 \div 16 = 513 \quad \text{M}$$

$$31 \times 2471 = 76601 \quad \text{A}$$

$$6\,120 \div 51 = 123 \quad \text{T}$$

$$11 \times 1328 = 14608 \quad \text{H}$$

$$3\,451 \div 29 = 119 \quad \text{S}$$

## Clue 2

Identify the numbers stated in the positions. These two numbers are joined together to give you a letter.

eg. 6 821 076 (ten thousands and hundreds) = 20 = T

9 301 268	(ten thousands and thousands)	A
3 128 169	(hundred thousand and tens)	P
6 093 126	(hundred thousands and hundreds)	A
620 009	(hundreds and ones)	I
512 083	(ten thousands and tens)	R
7 155 698	(hundred thousands and thousands)	O
3 902 396	(ten thousands and ones)	F
8 091 071	(hundreds and tens)	G
1 368 219	(millions and hundreds)	L
4 942 001	(hundreds and ones)	A
1 111 993	(millions and tens)	S
2 631 329	(thousands and ones)	S
306 521	(ten thousands and hundreds)	E
1 592 916	(millions and hundreds)	S

## Clue 3

Solve the number sentences using BIDMAS. The last two digits in your answer, will correspond to the correct letter.

eg.  $(3 + 4) \times 3 = 21 = \text{U}$

$$2^2 - (21 \div 7) = \mathbf{1}$$

A

$$3 \times 2 + (5 \times 2) = \mathbf{16}$$

P

$$(16 + 38) \div 6 = \mathbf{9}$$

I

$$7^2 - 11 \times 4 = \mathbf{5}$$

E

$$22 \div (7 + 4) + 1 = \mathbf{3}$$

C

$$(3 + 4) \times 2 - 9 = \mathbf{5}$$

E

$$(7 \times 4) - (4^2 - 3) = \mathbf{15}$$

O

$$11^2 \times 2 - 36 = \mathbf{206}$$

F

$$13 \times (31 + 6) + 21 = \mathbf{502}$$

B

$$36 \times 24 + 154 = \mathbf{1018}$$

R

$$15^2 - 10 = \mathbf{215}$$

O

$$(72 - 3) \div 3 = \mathbf{23}$$

W

$$6291 \times 3 - 11\,159 = \mathbf{7714}$$

N

$$(303 - 101) \times 4 = \mathbf{808}$$

H

$$(15\,261 - 14\,958) \div 3 = \mathbf{101}$$

A

$$(4^2 + 5^2) + 68 = \mathbf{109}$$

I

$$100 \div 2 - 32 = \mathbf{18}$$

R



## Clue 4

Solve the equations to give you a number that will correspond to the alphabet.

eg.  $2a - 8 = 12$      $a = 10$      $10 = J$

$a + 6 = 7$ <b><math>a = 1</math></b>	A
$2a - 28 = 10$ <b><math>a = 19</math></b>	S
$684 - a = 671$ <b><math>a = 13</math></b>	M
$5a + 45 = 50$ <b><math>a = 1</math></b>	A
	S
$a + a = 38$ <b><math>a = 19</math></b>	H
$8a = 64$ <b><math>a = 8</math></b>	E
$584 - 3a = 569$ <b><math>a = 5</math></b>	D
$6a - 20 = 4$ <b><math>a = 4</math></b>	B
$a + 24 = 26$ <b><math>a = 2</math></b>	E
$3a \times 6 = 90$ <b><math>a = 5</math></b>	S
	T
$a - 8 = 11$ <b><math>a = 19</math></b>	T
$10a + 296 = 496$ <b><math>a = 20</math></b>	E
$30 - a = 10$ <b><math>a = 20</math></b>	A
$8a = 40$ <b><math>a = 5</math></b>	C
$a - 84 = -83$ <b><math>a = 1</math></b>	H
$3a + 33 = 42$ <b><math>a = 3</math></b>	E
	R
$225 - a = 217$ <b><math>a = 8</math></b>	M
$6a + 15 = 45$ <b><math>a = 5</math></b>	U
$a - 20 = -2$ <b><math>a = 18</math></b>	G
$2a + 32 = 58$ <b><math>a = 13</math></b>	

$$a \div 7 = 3 \quad \mathbf{a = 21}$$

$$a^2 = 49 \quad \mathbf{a = 7}$$

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Miss Bookcase	Teacher	Maths	No	Brown	
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Mrs Quiz	Teacher	Maths	Yes	Grey	
Mrs Ruler	Teacher	Maths	No	Brown	
Mr Science	Cleaner	English	No	Grey	
Miss Scissors	Teaching assistant	Geography	Yes	Blonde	
Mrs Tape	Teaching assistant	History	Yes	Black	
Mr Thesaurus	Teacher	Maths	No	Grey	
Miss Whiteboard	Cleaner	Maths	No	Brown	
Miss Writing	Teacher	History	Yes	Blonde	

**Record the clues that were found.**

Clue 1: **A pin saying I love maths** \_\_\_\_\_

Clue 2: **A pair of glasses** \_\_\_\_\_

Clue 3: **A piece of brown hair** \_\_\_\_\_

Clue 4: **A smashed best teacher mug** \_\_\_\_\_

The murderer is **Miss Crayon** \_\_\_\_\_

Remember for all clues: a = 1, b = 2, c = 3, d = 4, e = 5 ect.