

## Wednesday 3<sup>rd</sup> June

If you haven't already, login to Sumdog <https://pages.sumdog.com/> using your Mymaths login and password, so that you can set your question level before the competition starts on Friday!

Remember to think about which questions would be best answered by a mental method, and which by a written method.

1	$867 + 300 =$	<input type="text"/>	<input type="checkbox"/> 1 mark
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2	$1,616 \div 8 =$	<input type="text"/>	<input type="checkbox"/> 1 mark
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3	$\frac{1}{8}$ of 32 =	<input type="text"/>	<input type="checkbox"/> 1 mark
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4	$67 \times 8 =$	<input type="text"/>	<input type="checkbox"/> 1 mark
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5	$6.54 \times 10 =$	<input type="text"/>	<input type="checkbox"/> 1 mark
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- Q1** Complete these number sentences so that they are correct.

$$6,843 \times 100 = \boxed{\phantom{000000}}$$

$$6,943 \div 1,000 = \boxed{\phantom{000}}$$

2 marks

- Q2** Evie has these digit cards:



She makes them into a six-digit number.

- It is larger than 300,000 but smaller than 400,000.
- It has four tens but no thousands.
- It has twice as many ten thousands and tens.
- The digit in the ones place is smaller than the digit in the tens place.

What number has Evie been thinking of?

## 4 Make 6

Now work out how you can make 6 from any of the following combinations using only two maths symbols (including square roots).

$$0 \quad 0 \quad 0 = 6$$

$$1 \quad 1 \quad 1 = 6$$

$$2 \quad 2 \quad 2 = 6$$

$$3 \quad 3 \quad 3 = 6$$

$$4 \quad 4 \quad 4 = 6$$

$$5 \quad 5 \quad 5 = 6$$

$$6 \quad 6 \quad 6 = 6$$

$$7 \quad 7 \quad 7 = 6$$

$$8 \quad 8 \quad 8 = 6$$

$$9 \quad 9 \quad 9 = 6$$

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Hint: You may not be able to do all the combinations above. You can also use brackets.

A Square root is a number multiplied by itself to give a product (square number).

Eg  $2 \times 2 = 4$ , so 2 is the square root of 4. This is the symbol for square root  $\sqrt{\quad}$ .

$\sqrt{4}$  would be equal to 2.  $\sqrt{9}$  would be equal to 3.  $\sqrt{16}$  would be equal to 4.

## Answers

Remember, (M) is written next to those questions you should have tried to solve mentally first. (W) means a written method is usually more efficient for this question.

1.  $867 + 300 = \mathbf{1,167}$  (M)

2.  $1,616 \div 8 = \mathbf{202}$  (W)

3.  $\frac{1}{8}$  of 32 =  $\mathbf{4}$  (M)

4.  $67 \times 8 = \mathbf{536}$  (W)

5.  $6.54 \times 10 = \mathbf{65.4}$  (M)

- Q1** Complete these number sentences so that they are correct.

$$6,843 \times 100 = \boxed{684,300}$$

$$6,943 \div 1,000 = \boxed{6.943}$$

2 marks

- Q2** Evie has these digit cards:



She makes them into a six-digit number.

- It is larger than 300,000 but smaller than 400,000.
- It has four tens but no thousands.
- It has twice as many ten thousands and tens.
- The digit in the ones place is smaller than the digit in the tens place.

What number has Evie been thinking of?



#### 4. Make 6

$$2 + 2 + 2 = 6$$

$$(3 \times 3) - 3 = 9 - 3 = 6$$

$$(\sqrt{4}) + (\sqrt{4}) + (\sqrt{4}) = 2 + 2 + 2 = 6$$

$$(5 \div 5) + 5 = 1 + 5 = 6$$

$$6 + (6 - 6) = 6 + 0 = 6$$

$$7 - (7 \div 7) = 7 - 1 = 6$$

$$8 - \sqrt{(\sqrt{8+8})} = 8 - \sqrt{4} = 8 - 2 = 6$$

$$(\sqrt{9} \times \sqrt{9}) - \sqrt{9} = 9 - 3 = 6$$