

## Intermediate Numeracy Summer 2019 P1 Q9a

You are given that:

1 gigalitre = 1 000 000 m<sup>3</sup>

1 megalitre = 1 million litres

Lake Vyrnwy is a reservoir in mid Wales.



- (a) Lake Vyrnwy can release between 25 and 45 megalitres of water per day from the dam.

The lake also supplies water through underground pipes to another reservoir at a rate of 230 000 m<sup>3</sup> per day.

- (i) How many litres are there in 25 megalitres?  
Circle your answer.

[1]

$25 \times 10^8$        $25 \times 10^{-6}$        $25 \times 10^7$        $2.5 \times 10^6$        $2.5 \times 10^7$

## Intermediate Numeracy Sam 1 P1 Q10b

- (b) Hari has a gold coin.  
It weighs 8g.  
What does this weigh in kg?  
Circle your answer.

[1]

$8 \times 10^3$  kg       $8 \times 10^{-2}$  kg       $8 \times 10^{-3}$  kg       $8^{-2}$  kg       $8^{-3}$  kg

## Intermediate Numeracy Summer 2017 P1 Q12

- (a) A standard piece of A4 paper is usually 0.08 mm thick.  
What is 0.08 mm written in **metres** in standard form?  
Circle your answer.

[1]

$8 \times 10^4$        $8 \times 10^{-4}$        $8 \times 10^{-3}$        $8 \times 10^3$        $8 \times 10^{-5}$

- (b) A piece of card is 1 mm thick.  
A stack of these pieces of card is  $3 \times 10^{-2}$  metres high.

- (i) Calculate how many pieces of card there are in the stack.

[2]

- (ii) What assumption have you made in answering (b)(i)?

[1]

- (c) In 2012 it was recorded that
- the total mass of the paper used for printing newspapers, in the world, was  $2.88 \times 10^7$  tonnes,
  - the world population was approximately  $7.2 \times 10^9$  people.

Use this information to calculate the mass of paper per person used to print newspapers in 2012.

Give your answer in **kg per person**.

[4]

## Intermediate Maths Nov 2017 P1 Q13

- (a) Express 0.00042 in standard form. [1]
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- (b) Calculate the value of  $\frac{7.2 \times 10^6}{2 \times 10^{-2}}$ .  
Give your answer in standard form. [1]
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- (c) Calculate the value of  $(4.7 \times 10^5) - (6.2 \times 10^4)$ .  
Give your answer in standard form. [2]
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## Intermediate Maths Sample 2 P1 Q14

Find, in standard form, the value of

- (a)  $\frac{2.7 \times 10^{10}}{6000}$ , [2]

- (b)  $(4.5 \times 10^{-2}) \times (3 \times 10^{-3})$ . [2]
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## Intermediate Maths Summer 2018 P1 Q14

- (a) Calculate the value of  $(2 \times 10^{-4}) \times (7.8 \times 10^9)$ .  
Give your answer in standard form. [2]

- (b) Calculate the value of  $\frac{3.9 \times 10^8}{3000}$ .  
Give your answer in standard form. [2]
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## Intermediate Maths Nov 2016 P1 Q14

Find, in standard form, the value of each of the following.

- (a)  $\frac{7.5 \times 10^6}{5000}$  [2]
- (b)  $(2.3 \times 10^3) + (6.4 \times 10^4)$  [2]
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## Intermediate Maths Sample 1 P1 Q16

Find, in standard form, the value of

(a)  $(4.1 \times 10^{-5}) \times 3000$ , [2]

(b)  $(1.5 \times 10^3) \div (3 \times 10^6)$ . [2]

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Intermediate Maths Summer 2019 P1 Q16b

(b) Calculate  $(3.4 \times 10^{-5}) \times 700$ .  
Give your answer in standard form. [2]

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Intermediate Maths June 2017 P1 Q18

Calculate the value of  $(5.41 \times 10^5) + (2.3 \times 10^4)$ .  
Give your answer in standard form. [2]