Higher Numeracy Sample 2 P2 Q2

2. Lech went on holiday from his home in Wales to Poland.
Before going, he went into his local money exchange shop to buy some Polish zloty.

Lech only had £250 to spend on buying zloty.
He wanted to buy as many zloty as possible.
Unfortunately, the money exchange shop only had 50 zloty notes.
The exchange rate to buy zloty was £1 = 4.37 zloty.

(a)   *You will be assessed on the quality of your organisation, communication and accuracy in writing in this part of the question.*

         How much did Lech pay for the zloty?

[5 + OCW 2]

(b)   While in Poland, Lech spent 340.40 zloty.
On returning to Wales from his holiday, Lech changed his zloty back to pounds.
Unfortunately, the money exchange shop would only buy back a whole number of zloty.
The exchange rate used for changing zloty back to pounds was
£1 = 4.43 zloty.
Calculate how much Lech received back from the money exchange shop.
Give your answer correct to the nearest penny.

[3]

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Higher Numeracy Sample 2 P1 Q2a

Derek works for a company which designs and fits kitchen cupboards.
Kitchen cupboards and worktops are usually measured in mm.

(a) A rectangular worktop needs to be covered in a special varnish.
The worktop measures 3000 mm long by 700 mm wide.
Calculate the area of the top surface of the worktop in m^2.

[2]

Higher Numeracy Nov 2017 P2 Q2c

(c)   The currency widely used in Patagonia is the Argentine peso.

Alvaro sells alpaca fleeces from Patagonia.
His fleeces are priced in Argentine pesos.
Tom lives in Wales and buys fleeces from Alvaro.
Tom pays for the fleeces in pounds.

Tom's purchases are shown in the table below.

	Number of fleeces bought	Price per fleece, in Argentine pesos	Exchange rate
January 2015	80	19.20	£1 = 15.47 Argentine pesos
March 2016	20	22.30	£1 = 15.21 Argentine pesos
April 2017	100	24.50	£1 = 14.93 Argentine pesos

For each of Tom's 3 purchases he paid correct to the nearest penny.

How much did Tom pay for these 200 fleeces, in pounds?
Give your answer correct to the nearest penny.
You must show all your working.   [4]

Higher Numeracy Nov 2017 P2 Q2

(a)   Bronwen and Alvaro decide to keep some alpacas on their farm in Patagonia.

Alvaro knows it is possible to keep between 4 and 6 alpacas on each acre of suitable farmland.
They have 13 hectares of farmland that they want to use to keep the alpacas.
Bronwen knows that 1 acre is $4046 \cdot 86 \, m^2$ and that $10\,000 \, m^2 = 1$ hectare.

Use this information to advise Bronwen and Alvaro on the number of alpacas they could keep on their farmland.
State any assumption that you make.
You must show all your working.   [6]

Higher Numeracy Nov 2018 P2 Q3

Amrit is planning to go to Switzerland.
The table below shows the rates for exchanging British pounds (£) and Swiss francs (CHF) at a money exchange shop.

Buy Swiss francs (CHF)	£1 buys 1.24 CHF
Sell Swiss francs (CHF)	1.28 CHF buys £1

The exchange shop:
* has all possible British notes and coins,
* sells and buys CHF **notes only** (no coins are available or accepted),
* has 10 CHF, 20 CHF, 50 CHF, 100 CHF, 200 CHF and 1000 CHF notes.

Amrit has £480 to buy Swiss francs.
Calculate
  • the maximum number of Swiss francs that Amrit can buy, and
  • how much, to the nearest penny, this will cost him.
You must show all your working.　　　　　　　　　　　　　　　　　　　　　　[5]

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Higher Numeracy Nov 2018 P2 Q4b

(b) Which of the following is equal to 0·2 m³?
　　　Circle your answer.　　　　　　　　　　　　　　　　　　　　　　　　　[1]

20 cm³　　　　　　200 cm³　　　　　　2000 cm³　　　　　200 000 cm³　　　　　2 000 000 cm³

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Higher Numeracy Nov 2018 P1 Q4bi

(b) (i) Jade has bought a new suitcase that can hold 65 litres.
　　　　　What is 65 litres in cm³?
　　　　　Circle your answer.　　　　　　　　　　　　　　　　　　　　　　[1]

　　　65 cm³　　　　　650 cm³　　　　　6 500 cm³　　　　　65 000 cm³　　　　　650 000 cm³

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Higher Numeracy Sam 1 P2 Q7a

Pack4 is a company that makes cardboard boxes.

(a)　　One of their boxes, in the shape of a triangular prism, is shown below.
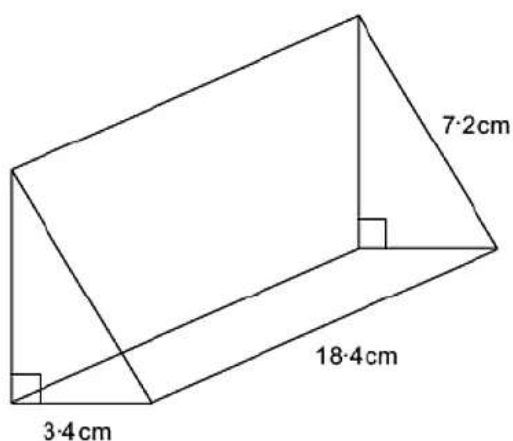

7·2cm

18·4cm

3·4 cm

Diagram not drawn to scale

A customer wants a box with a volume of 0·2 litres.

(i)   State by how much the volume is greater or less than 0·2 litres, giving your answer in cm³ correct to 2 significant figures.   [6]

(ii)   Explain why this may not be a suitable box for the customer.   [1]

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Higher Numeracy Sample 2 P2 Q13b

(b) Later in the day, Dewi's greatest velocity was 22 metres per second, measured to the nearest metre per second.
In that location, the speed limit on the road was 80 kilometres per hour.

Is it possible that Dewi exceeded the speed limit?
You must show all your working.

     [4]