Q1.

Mr Jones works for five days each week.

If he uses his car to travel to work,

> each day he drives a total distance of 24.2 miles
> his car travels 32.3 miles per gallon of petrol
> petrol costs £1.27 per litre.

If he uses the bus to travel to work, he can buy a weekly ticket for £19.50

Use 1 gallon = 4.5 litres

Is it cheaper if he uses his car or the bus to travel to work?

You **must** show your working.

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Answer ....

(Total 5 marks)

Q2.

A pop concert has a crowd of 2000 people rounded to 1 significant figure.

A rock concert has a crowd of 2000 people rounded to 2 significant figures.

Work out the largest possible difference between the exact numbers of the two crowds.

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Answer ....

(Total 3 marks)

Q3.

Use approximations to estimate the value of $\dfrac{3.92^2}{0.48}$

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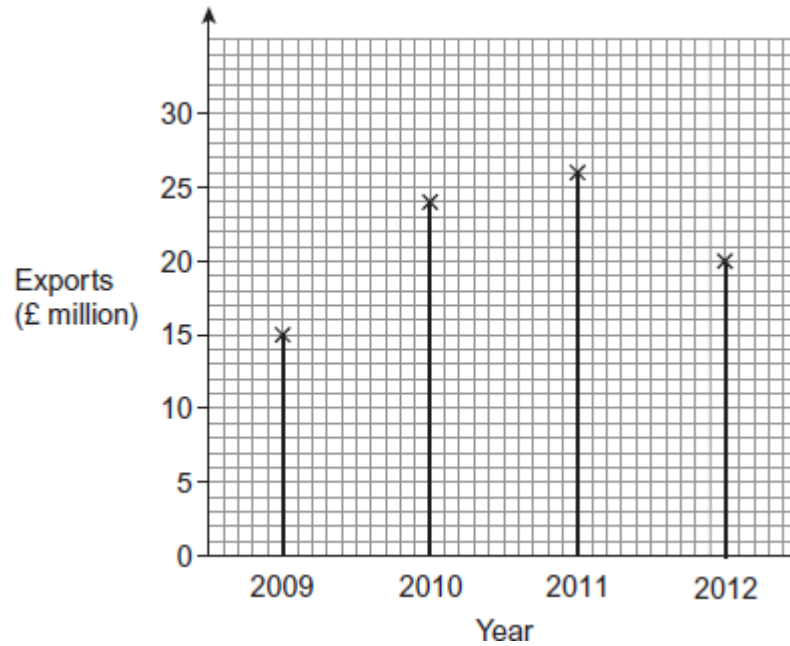Answer ....

(Total 2 marks)

Q4. The diagram shows information about the exports of a company.

Exports

(a) Work out the **increase** in the exports from 2009 to 2010.

....

Answer £..million

(2)

(b) Write the value of the exports in 2011 to 1 significant figure.

....

Answer £..million

(1)

(c) The pie chart shows information about the exports of the company in 2012.

Exports in 2012
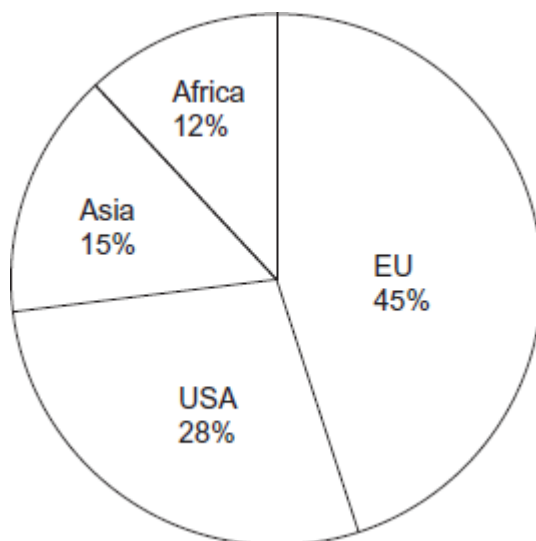
Use **both** diagrams to work out the value of the exports to the **USA** in 2012.

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Answer £..million

(3)
(Total 6 marks)

Q5.

A number, x, is 30 when rounded to the nearest 10

Work out the value of the square root of the least possible value of x.

Answer ....

(Total 2 marks)

Q6.

Use your calculator to work out $\dfrac{3.21 + 4.89}{5.62 - 1.89}$ as a decimal.

(a)   Write down your full calculator display.

....

Answer ....

(1)

(b)   Write your answer to 1 decimal place.

....

Answer ....

(1)
(Total 2 marks)

Q7.

Nick went to a football training camp.

(a)   He weighed 80 kg before the training camp.
He weighed 74 kg after the training camp.

Work out his percentage weight loss.

....

....

....

Answer .... %

(3)

(b)   Nick's backpack weighs 12 kg to the nearest kilogram.

What is the least the backpack could weigh?

Circle the correct answer.

11.4 kg   11.5 kg   11.6 kg   11.9 kg   12 kg

(1)
(Total 4 marks)

Q8. Here are four cards.

| 5 | 3 | 4 | 8 |

(a)   Write down the value of the digit 5 in the number 5348

Answer ....

(1)

(b)   Write the number 5348 to the nearest hundred.

Answer ....

(1)

(c)   What is the largest number you can make using all four cards?

Answer ....

(1)

(d)   What is the smallest **odd** number you can make using all four cards?

Answer ....

(1)
(Total 4 marks)

Q9.

Not drawn accurately

20 cm

9 cm

A

B

C
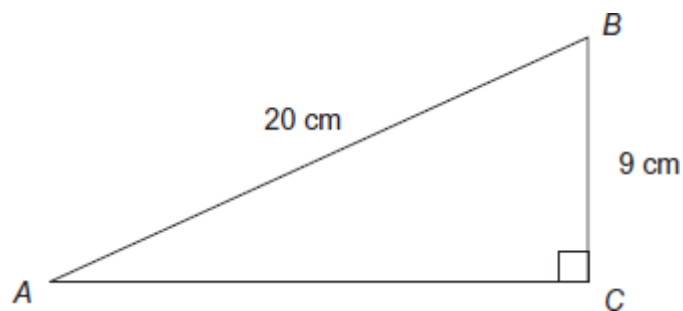
Work out the length *AC*.
Give your answer to 1 decimal place.

....

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Answer .... cm

(Total 4 marks)

Q10.(a)   Use your calculator to work out   6.7 + 21.5 − 3.09

Answer ....

(1)

(b)   Use your calculator to work out 265 × 89

Answer ....

(1)

(c)   Use your calculator to work out $\sqrt{227}$
Write down your full calculator display.

Answer ....

(1)

(d)   Give your answer to part (c) to 1 decimal place.

Answer ....

(1)
(Total 4 marks)

Q11. These cars are for sale.

Car A

£13 420

Car B

£17 860

Car C

£12 590

© Robert Churchill/iStock

(a)   Which car is the cheapest?

Answer ....

(1)

(b)   The price of each car is rounded to the nearest £100.

Which price changes by the **greatest** amount?
You **must** show your working.

....

....

....

Answer ....

(3)
(Total 4 marks)

Q12. There were 17 million families in the UK in 2006.

(a)   The mean number of children per family was 1.8

How many children were there in the UK?
Give your answer in standard form.

....

....

....

Answer ....

(2)

(b)   The total income of families in the UK was   £ 5.6×10^{11}

What was the mean income per family?
Give your answer to an appropriate degree of accuracy.

....

....

....

Answer £ ....

(3)
(Total 5 marks)

Q13.(a)   Write   3.574   to 1 decimal place.

Answer ....

(1)

(b)   Put these decimals in order, starting with the smallest.

0.5   0.62   0.325

Answer .... , ... , ...

(1)

(c)   Circle the **two** values that are equivalent to 0.8

8% $\frac{4}{5}$ 80% $\frac{8}{100}$ $\frac{1}{8}$

(2)
(Total 4 marks)

Q14. Chris recorded the number of runs he scored in five cricket matches.

21   20   29   22   24

(a)   Calculate the mean.
       Give your answer to the nearest whole number.

       ....

       ....

       ....

                  Answer ....

(4)

(b)   Calculate the range.

       ....

                  Answer ....

(1)

Tommy also recorded the number of runs he scored in the five matches.

(c)   Tommy's mean was 30.

       He says,   "I scored more runs than Chris."

       Use the data to comment on this statement.

       ....

       ....

       ....

(1)

(d)   Tommy's range was 75.

       Chris says,   "I was more consistent than Tommy."

       Use the data to comment on this statement.

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(1)

(Total 7 marks)