**Answer ALL TWENTY FIVE questions.**

**Write your answers in the spaces provided.**

**You must write down all the stages in your working.**

**1** (a) Write these decimals in order of size.
Start with the smallest decimal.

$$7.831 \qquad 7.04 \qquad 7.002 \qquad 7.9 \qquad 7.013$$

**(1)**

(b) Write 7% as a decimal.

**(1)**

(c) Write 0.47 as a fraction.

**(1)**

(d) Write 0.63 as a percentage.

........................ %
**(1)**

(e) Write a number in the box to make the calculation correct.

$$0.003 \times \boxed{\phantom{xxxxxxx}} = 9$$

**(1)**

**(Total for Question 1 is 5 marks)**

**2** Amelie is using ribbon to make decorations.

She has 7 metres of ribbon.
Each decoration needs 45 centimetres of ribbon.

What is the greatest number of decorations that Amelie can make?

**(Total for Question 2 is 3 marks)**

**3** (a) Shade $\dfrac{3}{7}$ of the rectangle.
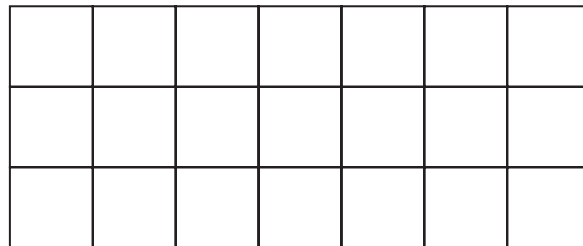


**(1)**

(b) Write $\dfrac{23}{3}$ as a mixed number.

**(1)**

(c) Find $\dfrac{2}{5}$ of 60 cm.

............................................. cm

**(2)**

Claude says that $\dfrac{1}{6}$ is exactly halfway between $\dfrac{1}{4}$ and $\dfrac{1}{8}$

(d) Is Claude correct?
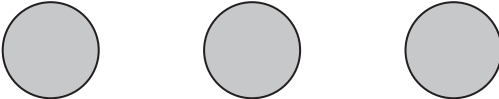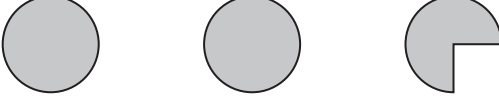You must give a reason for your answer.

**(2)**

**(Total for Question 3 is 6 marks)**

**4** The pictogram gives information about the number of cakes Peony baked on Monday, on Tuesday, on Wednesday and on Thursday.

| Monday | ● ● ● |
| Tuesday | ● ◗ |
| Wednesday | ● ● ◔ |
| Thursday | ● ● ● ● ◞ |
| Friday | |

● represents 8 cakes

(a) How many cakes did Peony bake on Wednesday?

(1)

Peony baked more cakes on Thursday than on Monday.

(b) How many more?

(1)

Peony baked 20 cakes on Friday.

(c) Show this information on the pictogram.

(1)

**(Total for Question 4 is 3 marks)**

**5** The table gives the midnight temperatures on 1st January for five cities in the USA.

| City | Midnight temperature |
|---|---|
| Boston | –5 °C |
| Philadelphia | –4 °C |
| Orlando | 10 °C |
| Chicago | –6 °C |
| Phoenix | 8 °C |

Here are the temperatures in °C.

$$-5 \qquad -4 \qquad 10 \qquad -6 \qquad 8$$

(a) Write these numbers in order of size.
Start with the smallest number.

**(1)**

(b) Work out the difference between the midnight temperature in Orlando and the midnight temperature in Boston.

............................ °C

**(1)**

(c) Work out the temperature that is exactly halfway between 8 °C and –6 °C.

............................ °C

**(1)**

On 1st January the midnight temperature in Minneapolis was 10 °C lower than the midnight temperature in Philadelphia.

(d) Work out the midnight temperature in Minneapolis.

............................ °C

**(1)**

**(Total for Question 5 is 4 marks)**

**6** 80 students studying sciences were asked which science subject they liked the best.

Some information about the results is shown in the two-way table.

| | **Biology** | **Chemistry** | **Physics** | **Total** |
|---|---|---|---|---|
| **Boys** | 25 | | 7 | |
| **Girls** | | 4 | | 43 |
| **Total** | 31 | | | 80 |

(a) Complete the two-way table.

**(3)**

One of the students is picked at random.

(b) Write down the probability that this student is a girl.

**(1)**

One of the girls is picked at random.

(c) Write down the probability that this girl likes Chemistry the best.

**(2)**

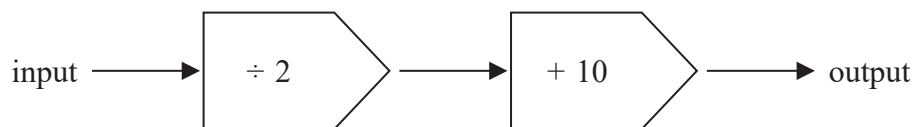**(Total for Question 6 is 6 marks)**

**7** Here is a number machine.

input $\longrightarrow$ $\div 2$ $\longrightarrow$ $+ 10$ $\longrightarrow$ output

(a) Work out the output when the input is 8

**(1)**

(b) Work out the input when the output is 120

**(2)**

**(Total for Question 7 is 3 marks)**

**8** A train journey started at 17 50 and finished at 02 25 the next day.

How long did the train journey take?
Give your answer in hours and minutes.

.................... hours .................... minutes

**(Total for Question 8 is 2 marks)**

**9** Pierre bought

       2 cups of coffee at 2.10 euros a cup
       2 cups of tea at 1.80 euros a cup
and  3 croissants

Pierre paid with a 20 euro note.
He received 8.75 euros change.

The cost of each croissant was the same.

Work out the cost of 1 croissant.

.......................................................... euros

**(Total for Question 9 is 3 marks)**