|  |  |
| --- | --- |
| **OCN NI Use Only** | |
| **Q** | **Mark** |
| 1a |  |
| 1b |  |
| 1c |  |
| 1d |  |
| 1e |  |
| 1f |  |
| 1g |  |
| 1h |  |
| 1i |  |
| 2a |  |
| 2b |  |
| 2c |  |
| 2d |  |
| 2e |  |
| 2f |  |
| 2g |  |
| **Total** |  |

**OCN NI Level 2 Certificate in Essential Skills**

**Application of Number**

**The Takeaway Shop**

**Learner name (Block Capitals) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Learner signature \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Centre \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Assessment Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Instructions to candidates:**

You should have the following for this assessment:

* Pen with black or blue ink
* Pencil and eraser
* 30 cm ruler
* Calculator
* Protractor

General Instructions:

* There are 2 tasks to complete
* You must attempt both tasks
* Each task is worth 25 marks
* Read through each task carefully
* Show your working out; you may get marks for it
* Write all your working out and answers in this booklet
* Check your calculations
* Remember to put units on your answers
* Total marks available: 50
* You have 1½ hours to complete the assessment.

Candidate Mark %

Pass Mark %

**Task 1 – The Shop**

Ted and Judith own a takeaway food shop.

Judith keeps a record of any money that is paid in to, or out of, their bank account.

The records for January are shown below.

The **boxes shaded grey** represent entries that are missing in the statement.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Date** | **Description** | **Credit** | **Debit** | **Balance** |
| 1/1/18 | Sales | £3375.00 |  | £4452.65 |
| 3/1/18 | Supplies |  | £4488.76 |  |
| 11/1/18 | Tax refund |  |  | £89.40 |
| 18/1/18 | Sales | £4880 |  | £4969.40 |
| 31/1/18 | Building work |  | £5352 |  |

**1a** Complete the missing entries in the accounts for January.

**(3 marks)**

Write your answers in the table above.

Show your working out below.

**1a**

**1b** Give a reason why Judith should be concerned about the balance on 31/1/18

**(1 mark)**

Give your answer below:

|  |
| --- |
| Reason: ­­­­­­­­­­­­­­­­­­­­­­\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_­­­­­­­­­­­­­­­­­­­­­­­­\_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

Ted has introduced six new meal deals.

The pie chart below shows how many customers bought the different meal deals last month:

426 Sausage Suppers were sold last month

**1c** Calculate the number of **Cod Suppers** sold **(5 marks)**

* You will need to use your protractor.
* Round measurements to the nearest degree.

Show your working out **and** answer on the next page:

**1c**

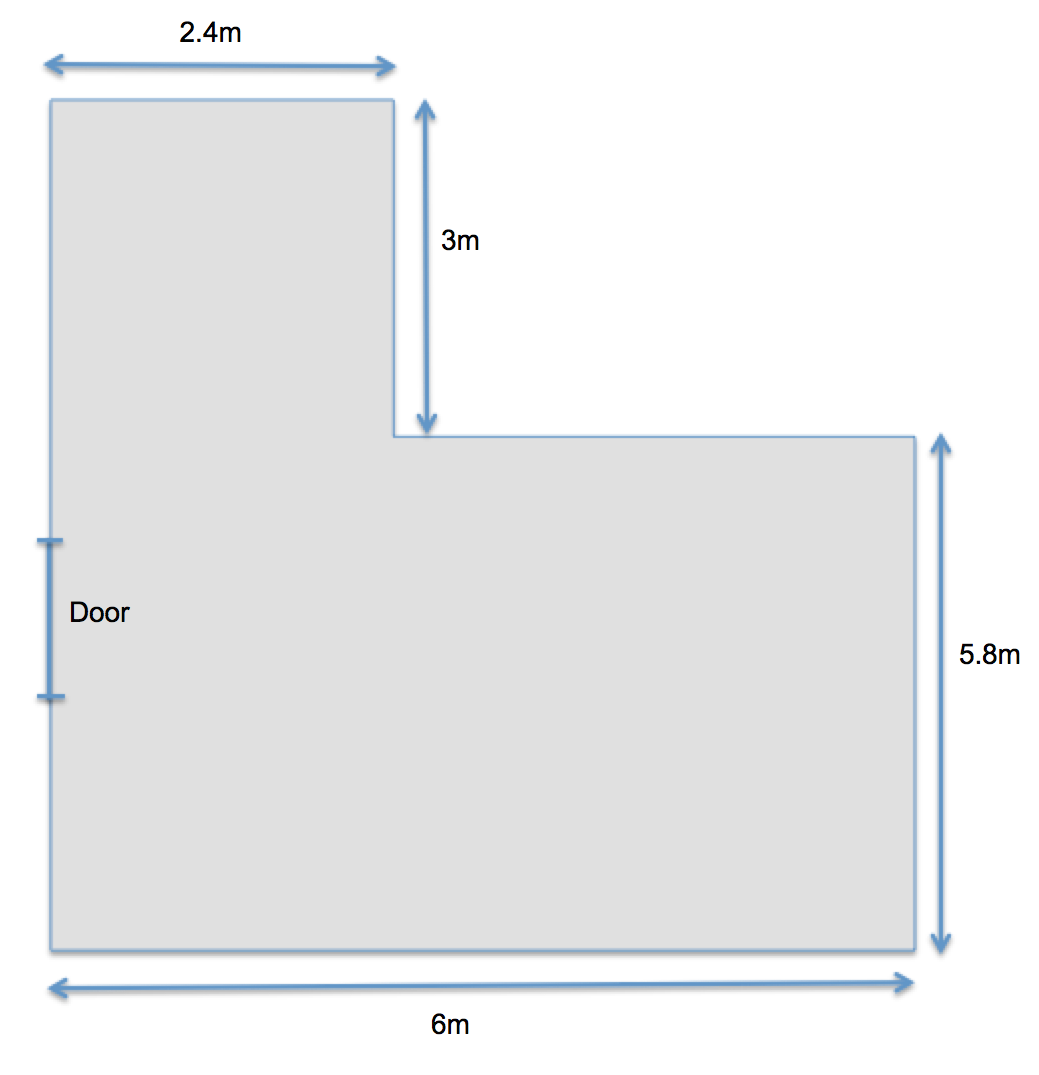
Number of Cod Suppers sold: **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**1d** Show a calculationcheckthat you could use in question **1c**.

**(1 mark)**

Ted tiles the area where customers wait for their takeaways.

The floor plan of the waiting area is shown below:



**1.8m**

**3.6m**

**5m**

**Not to scale**

**3m**

The tiles are square and **90cm** wide.

Tiles come in boxes of **32** tiles.

Ted calculates that one box of tiles will be enough to cover the area.

**1e** Is Ted correct?  **(6 marks)**

You **must** show calculations to justify your answer on the next page:

**1e**

Is Ted correct? ­­­­­­­­­­­­­­­­­­­­­­­­­­­\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Customers order takeaway food either by telephoning the shop or by coming into the shop to order over the counter.

In the bar chart below, Judith compares the orders for the four weeks in February.

The total number of counter orders for February was 360

**1f** Calculate the number of **counter orders** for week 4

Complete the bar chart above.

You **must** show calculations below to justify your answer. **(2 marks)**

|  |
| --- |
| **1f**  Number of counter orders: \_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

**1g** What is the average (mean) number of **telephone orders** per week in February?

Show your working out **and** answer below:

**(3 marks)**

|  |
| --- |
| **1g**  Average number of telephone orders: \_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

The orders for December and January are shown below:

|  |  |  |
| --- | --- | --- |
| ***Month*** | ***Telephone*** | ***Counter*** |
| **December** | 620 | 615 |
| **January** | 545 | 540 |

Ted looks at the bar chart for February and suggests employing another delivery driver.

**1h** Why might he think that?

Give a possible reason below: **(1 mark)**

Reason: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_­­­­­­­­­­­­­­­­­­­­

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Ted runs a promotion to increase over the counter sales.

Customers may get discount off the price of their food by randomly picking a token from a bag.

**PROMOTION**

**Choose a token from a bag**

**Gold Token – get £10 off**

**Silver Token - get £5 off**

**White Token - try again next time**

In the bag there are

3 gold tokens,

15 silver tokens and

33 white tokens

The first customer picks a white token from the bag.

**1i** What is the probability that the second customer chooses a gold token?

**(3 marks)**

Express your answer as a percentage.

Show your working out **and** answer below:

**1i**

Probability of choosing a gold token: \_\_\_\_\_\_\_\_\_\_\_\_ %

**Task 2 - The Customers**

Anne leaves home at twenty past seven in the morning to go to work.

* She takes 10 minutes to walk from her home to the bus stop on Merrion Road.
* She takes the bus to Greenway.
* She spends 5 minutes buying a coffee at the takeaway.
* It then takes her 20 minutes to walk to work.
* She must arrive at work no later than 8.30am.

Anne uses the bus timetable shown below:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Belgate Road | 0700 | 0710 | 0718 | 0726 | 0730 |
| Merrion Road | 0710 | 0720 | 0728 | 0736 | 0740 |
| Park Street | 0717 | 0727 | 0735 | 0743 | 0757 |
| Carrs Corner | 0725 | 0735 | 0743 | 0754 | 0802 |
| Greenway | 0737 | 0748 | 0758 | 0809 | 0817 |

**2a** Does Anne arrive at work on time?

**(3 marks)**

You **must** show calculations to justify your answer below:

**2a**

Does Anne arrive at work on time? \_\_\_\_\_\_\_\_\_\_\_\_\_

Mike and Anne buy a takeaway.

The bill comes to £38.50

They agree to split the bill in the ratio 7:4

**2b** Calculate how much Mike pays for his share of the bill?

**(3 marks)**

Show your working out **and** answer below.

**2b**

How much does Mike pay? \_\_\_\_\_\_\_\_\_\_\_\_

Mike buys cans of soft drink.

Each can holds 250ml.

The table below shows the nutritional information for the soft drink.

|  |  |
| --- | --- |
| **NUTRITIONAL INFORMATION**  **per 100 ml** | |
| Calories  Fat  Sodium  Total Carbohydrates  Sugars | 44 calories  0g  80g  11.2g  10.8g |

The RDA (Recommended Daily Allowance) of sugar for Mike is 120g per day.

**2c** What is the maximum number of cans that Mike can drink to stay within his RDA?

**(4 marks)**

Show your working out **and** answer below:

.

**2c**

What is the maximum number of cans? \_\_\_\_\_\_\_\_\_\_\_\_\_

Mike takes a job in the takeaway shop as an evening delivery driver.

* He wants to work 20 hours per week.
* He would like one evening off during the week.

Judith the shop owner says;

* A full evening shift lasts from 19:00 to midnight.
* Mike must do a full shift on Friday and Saturday evenings.

**2d** Use the table below to make out a possible rota for Mike:

**(3 marks)**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Day of week** | **Sun** | **Mon** | **Tue** | **Wed** | **Thur** | **Fri** | **Sat** |  |
| **Hours** | **0**  *(shop closed)* |  |  |  |  |  |  | ***Total*** |

Use the space below if you need to do calculations:

**2d**

Number of cartons: \_\_\_\_\_\_\_\_\_\_\_\_

Hot food must be served to customers at a temperature at, or above 63°C.

Mike delivers his orders to customers within 20 minutes.

The formula below calculates the temperature of the food after 20 minutes:

T = C + 0.33(F – C)

Where T = temperature of the food after 20 minutes;

C = temperature in Mike’s car;

F = temperature of the food when it leaves the shop.

When Mike leaves the shop the food is 95oC.

The temperature in Mike’s car is 22oC.

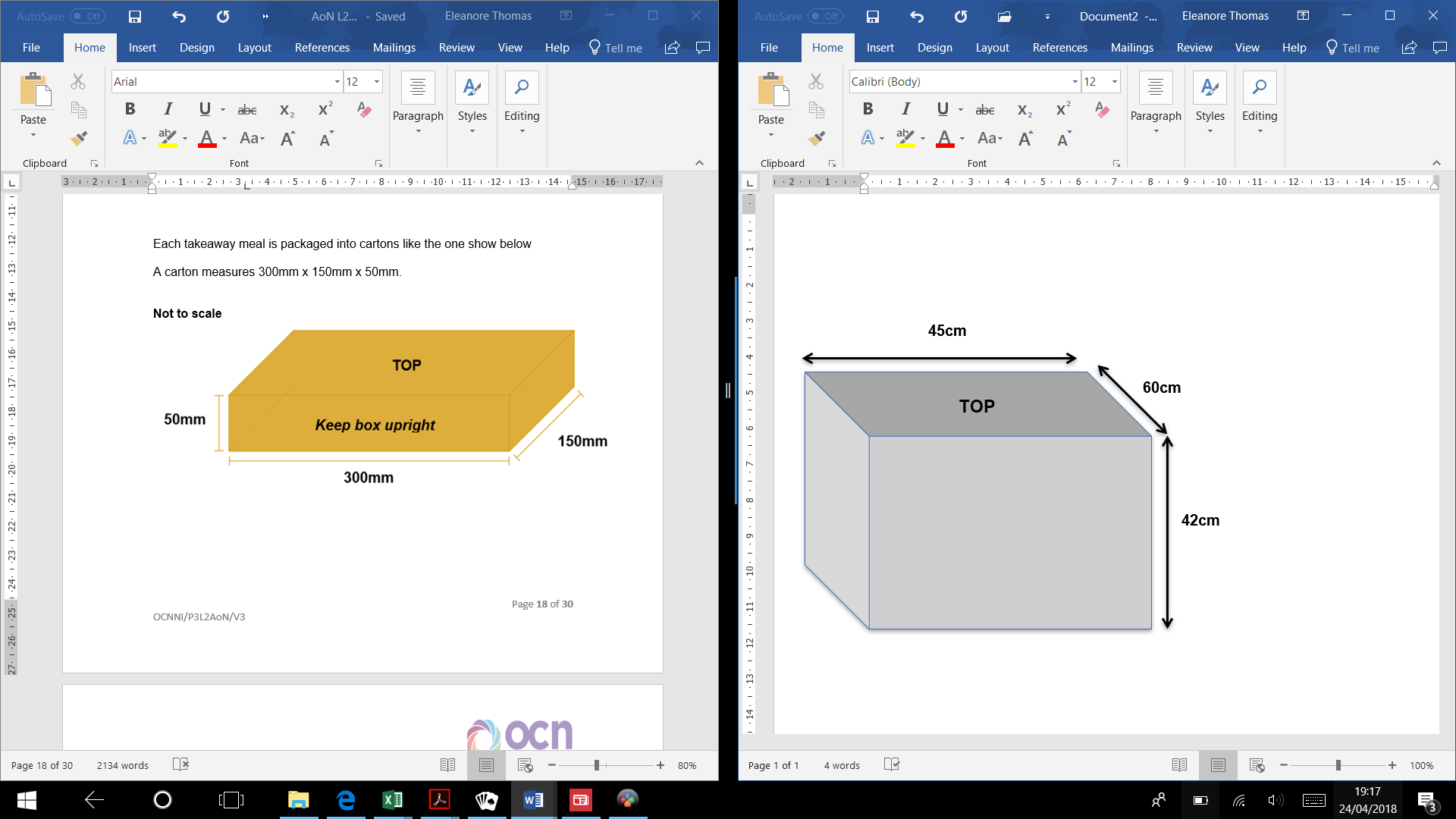
**2e** Is the food at the correct temperature when it reaches the customer?

**(4 marks)**

You **must** show calculations to justify your answer below:

|  |
| --- |
| **2e**  Is the food at the correct temperature? **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** |

Mike is supplied with a hot food storage box as shown below:



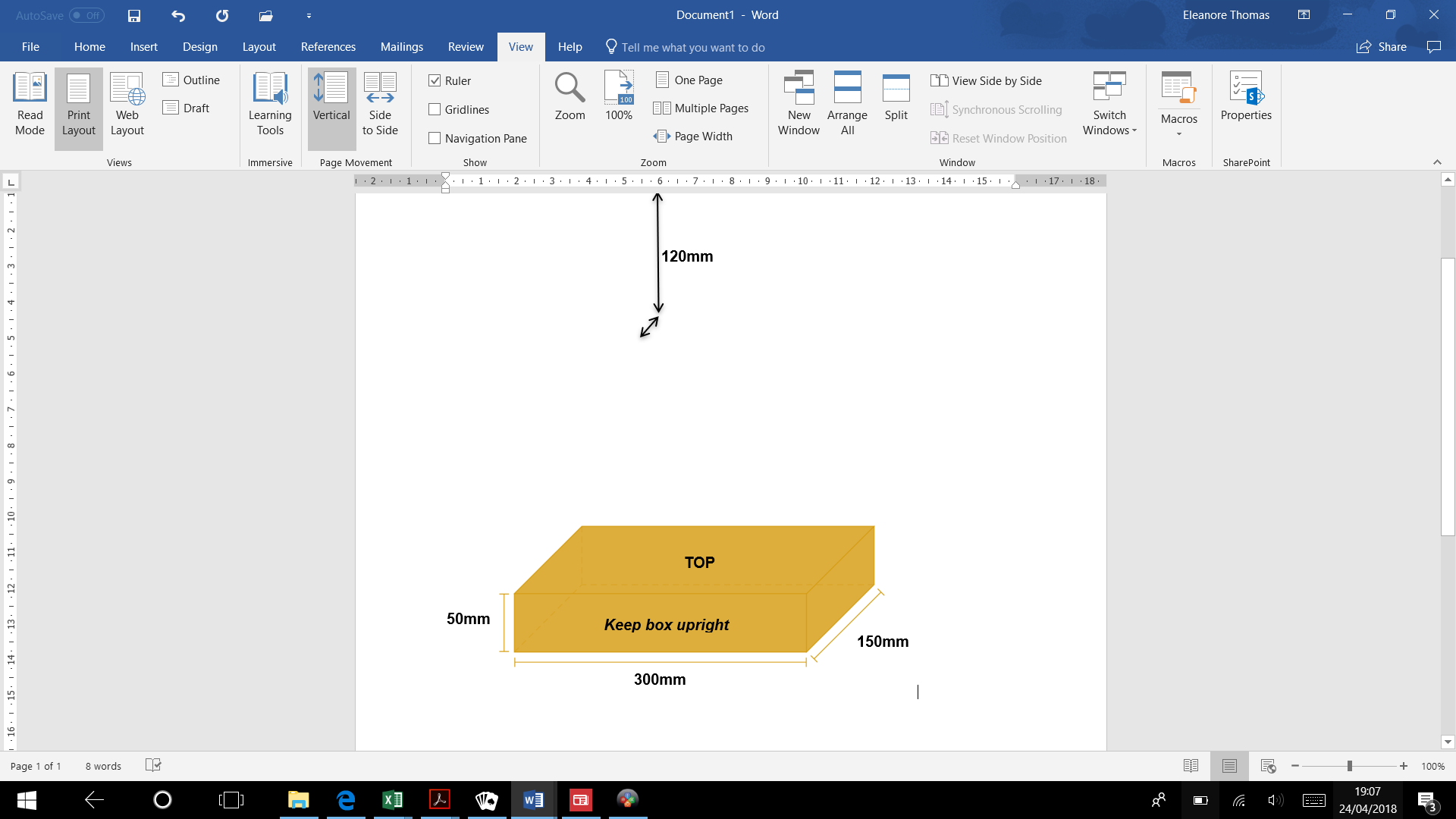
**Not to scale**

***Keep box upright***

Each takeaway meal is packed into cartons like the one show below.

A carton measures 300mm x 150mm x 50mm.

**Not to scale**



Mike must be able to close the top of the hot food storage box.

**2f** How many cartonswill it take to fill the hot food storage box?

**(5 marks)**

Show your working out **and** answer below:

|  |
| --- |
| **2f**  Number of cartons: \_\_\_\_\_\_\_\_\_\_\_\_ |

Mr. Brown keeps a record of the **number of minutes** that he has to wait for his takeaway to be delivered.

The times for his last 8 orders are shown below:

|  |  |  |  |
| --- | --- | --- | --- |
| 12 | 20 | 15 | 17 |
| 20 | 14 | 18 | 13 |

**2g** Calculate the median (average) waiting time that it takes for Mr. Brown’s takeaway to arrive.

**(3 marks)**

Show your working out **and** answer below:

**2g**

Median waiting time: \_\_\_\_\_\_\_\_\_\_\_ minutes