Design & Technology

Mathematics for D&T – Graphs and Charts

Materials required for questions

- Pencil
- Rubber
- Calculator

Instructions

- Use black ink or ball-point pen
- Try answer all questions
- Use the space provided to answer questions
- Calculators can be used if necessary

Advice

- Marks for each question are in brackets
- Read each question fully
- Try to answer every question
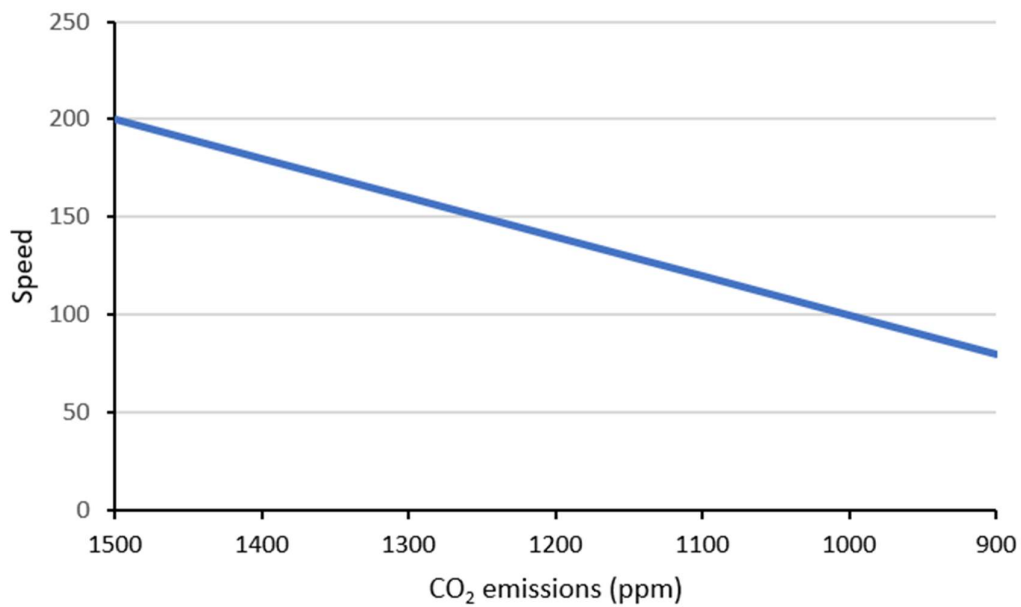- Don't spend too much time on one question

Good luck!

Q1. The table shows the relative humidity at different times of the day

12:00	13:00	14:00	15:00
65%	68%	72%	75%

Draw a graph to represent this data and predict the relative humidity at 16:30. You must draw a graph for full marks **(3 marks)**

Q2. Calculate the CO_2 emissions when the car is not moving **(4 marks)**

Q3. The table shows scores for a DT class. Complete the cumulative frequency graph and estimate the number of scores about 70% **(5 marks)**

Score (%)	Frequency	Cumulative frequency
0 < x < 20	2	
20 < x <40	3	
40 < x < 60	5	
60 < x < 80	8	
80 < x < 100	3	

Q4. The table shows the RPM needs for different densities of materials

RPM	Density (kg/m^3)
1200	14
1500	18
1800	22

Calculate the density for a material with a RPM of 800 **(4 marks)**

Q5. The table below shows the donation amounts for a new DT workshop. Represent this data as a histogram and calculate the number of donations over £900 **(4 marks)**

Donation amount	Frequency
$0 < x < 250$	12
$250 < x < 500$	14
$500 < x < 750$	5
$700 < x < 1000$	7
$1000 < x < 1500$	3

Answers

Q1.
Around 80% ish

Q2.
500ppm

Q3.
Graph drawn
13-14 as estimate

Q4.
$8.67kg/m^3$

Q5.
5.33 people