

# DEMO Data Handling Questions

Please write your answers on this sheet.

1: Complete the cumulative frequency table:

a)

area (cm <sup>2</sup> )	Frequency	area (cm <sup>2</sup> )	Cum Freq
$0 < A \leq 10$	1	$A \leq 10$	
$10 < A \leq 20$	8	$A \leq 20$	
$20 < A \leq 30$	18	$A \leq 30$	
$30 < A \leq 40$	22	$A \leq 40$	
$40 < A \leq 50$	11	$A \leq 50$	

b)

area (m <sup>2</sup> )	Frequency	area (m <sup>2</sup> )	Cum Freq
$40 < A \leq 50$	18	$A \leq 50$	
$50 < A \leq 60$	32	$A \leq 60$	
$60 < A \leq 70$	24	$A \leq 70$	
$70 < A \leq 80$	9	$A \leq 80$	
$80 < A \leq 90$	1	$A \leq 90$	

c)

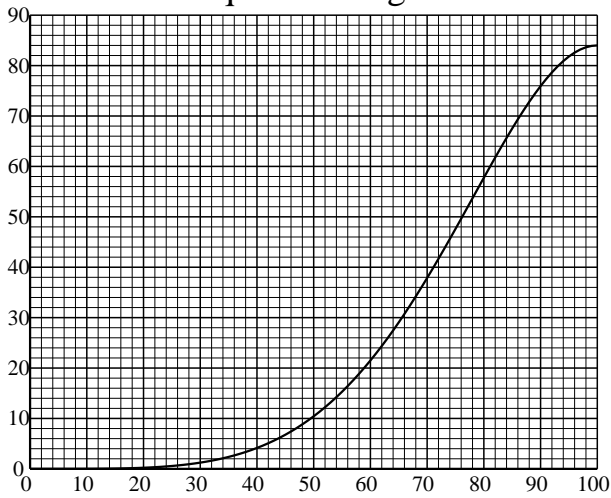
mass (kg)	Frequency	mass (kg)	Cum Freq
$20 < m \leq 30$	7	$m \leq 30$	
$30 < m \leq 40$	17	$m \leq 40$	
$40 < m \leq 50$	16	$m \leq 50$	
$50 < m \leq 60$	10	$m \leq 60$	
$60 < m \leq 70$	2	$m \leq 70$	

d)

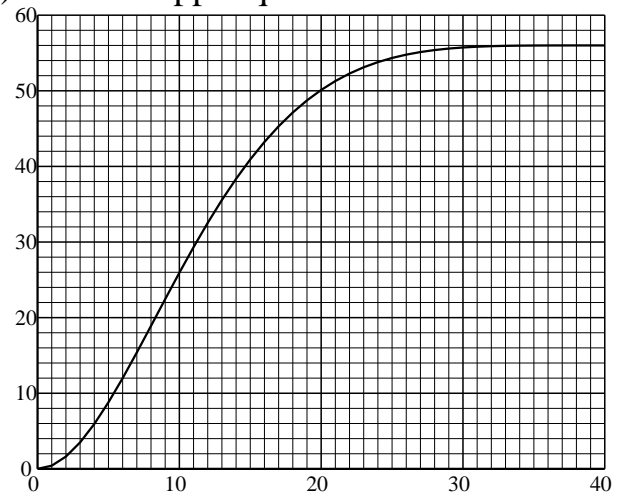
length (cm)	Frequency	length (cm)	Cum Freq
$50 < l \leq 60$	2	$l \leq 60$	
$60 < l \leq 70$	11	$l \leq 70$	
$70 < l \leq 80$	22	$l \leq 80$	
$80 < l \leq 90$	25	$l \leq 90$	
$90 < l \leq 100$	12	$l \leq 100$	

2: Read the following off the cumulative frequency graph:

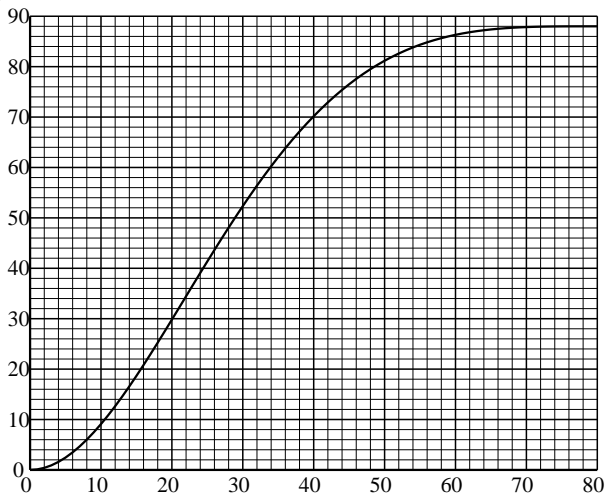
a) Find the interquartile range:



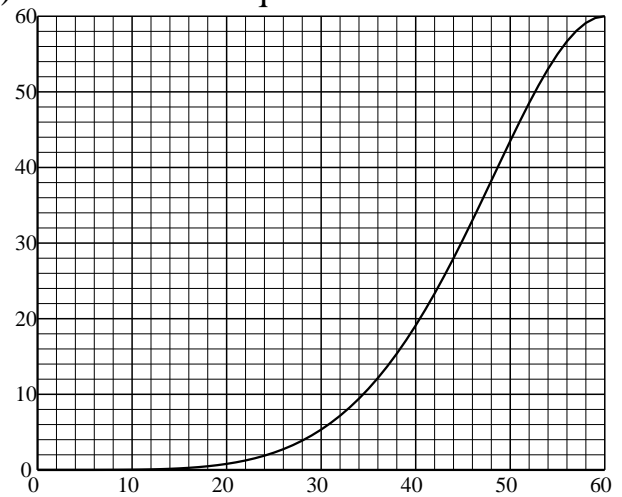
b) Find the upper quartile:



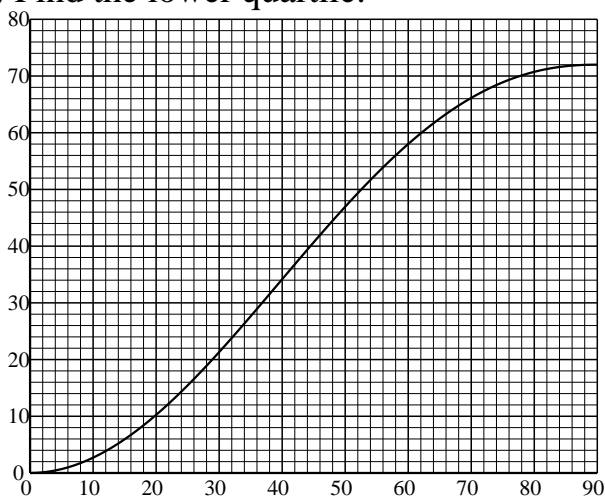
c) Find the median:



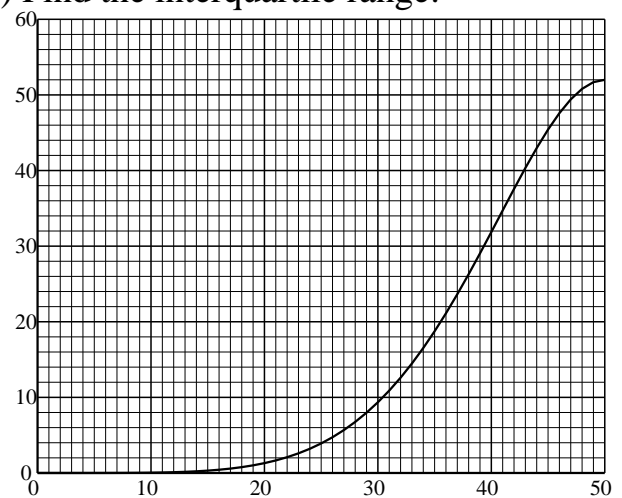
d) Find the lower quartile:



e) Find the lower quartile:

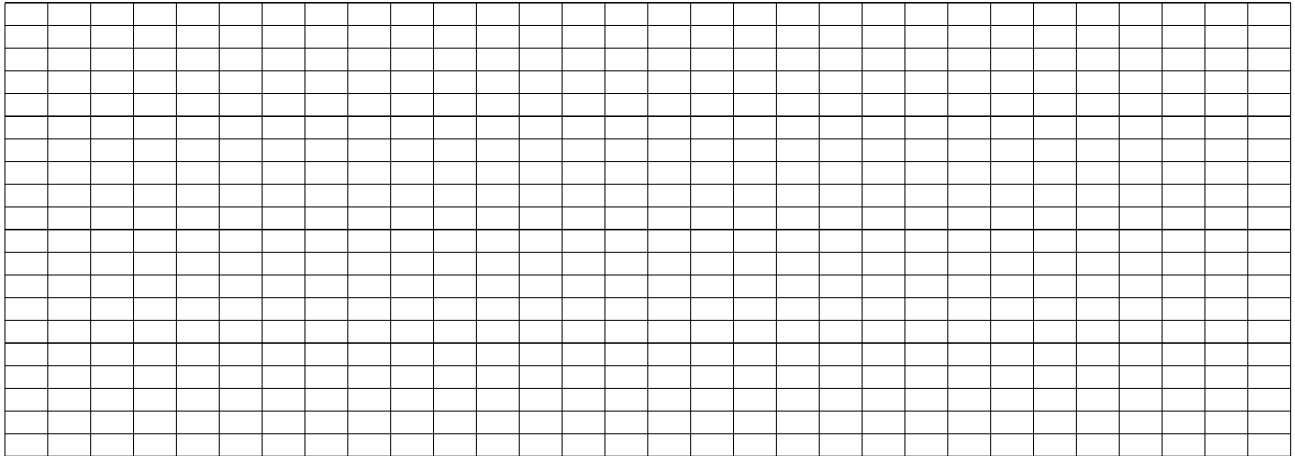


f) Find the interquartile range:



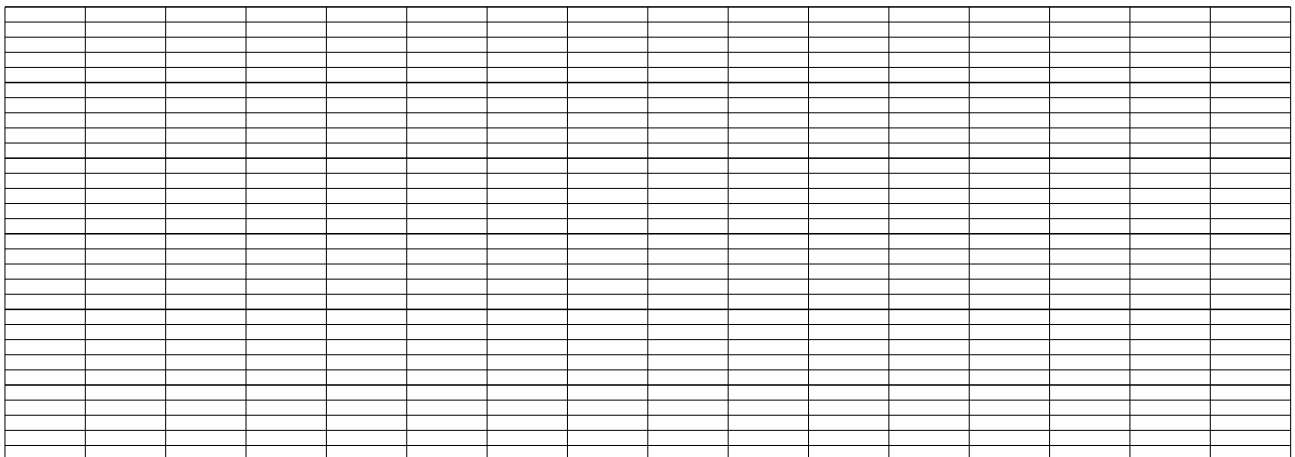
3: Plot the following histogram:

a)	age (years)	450 – 550	550 – 700	700 – 900	900 – 1150	1150 – 1200
	frequency	200	1200	3600	4250	50



450 500 550 600 650 700 750 800 850 900 950 1000 1050 1100 1150 1200

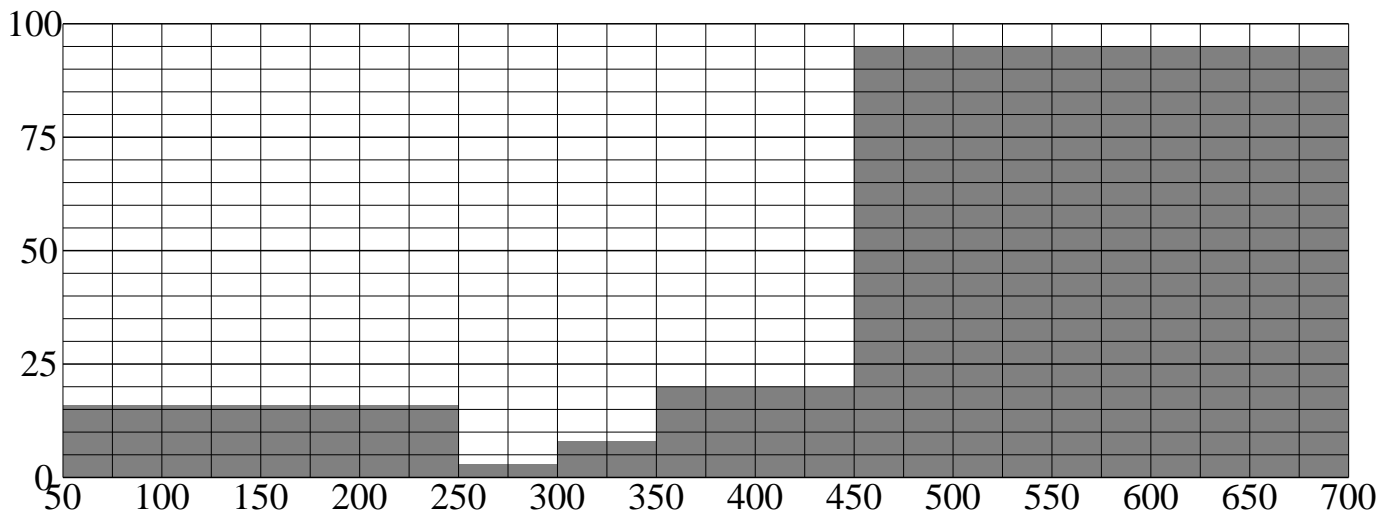
b)	diameter (cm)	50 – 55	55 – 65	65 – 70	70 – 85	85 – 90
	frequency	7	3	5	42	3



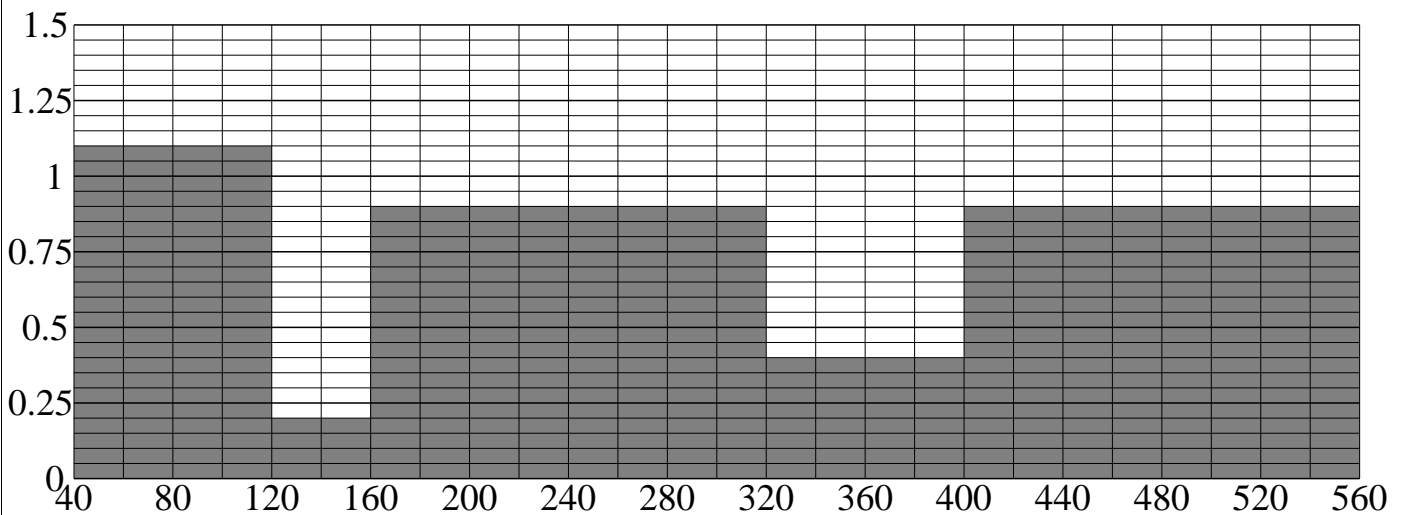
50 55 60 65 70 75 80 85 90

4: Complete the table from the histogram:

a)	time (min)	50 – 250	250 – 300	300 – 350	350 – 450	450 – 700
	frequency					

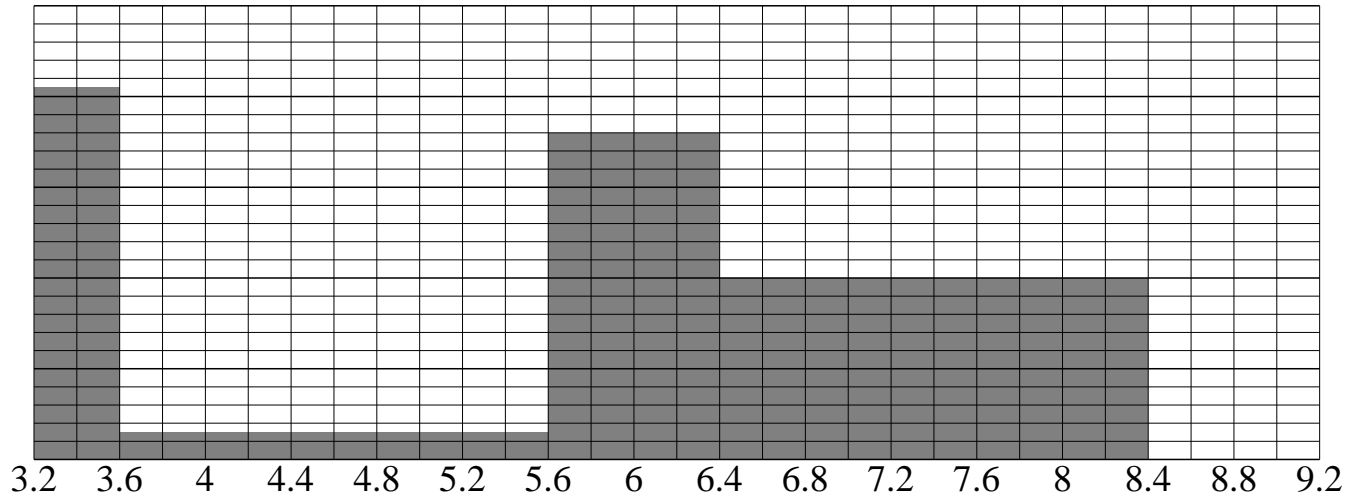


b)	volume (m <sup>3</sup> )	40 – 120	120 – 160	160 – 320	320 – 400	400 – 560
	frequency					

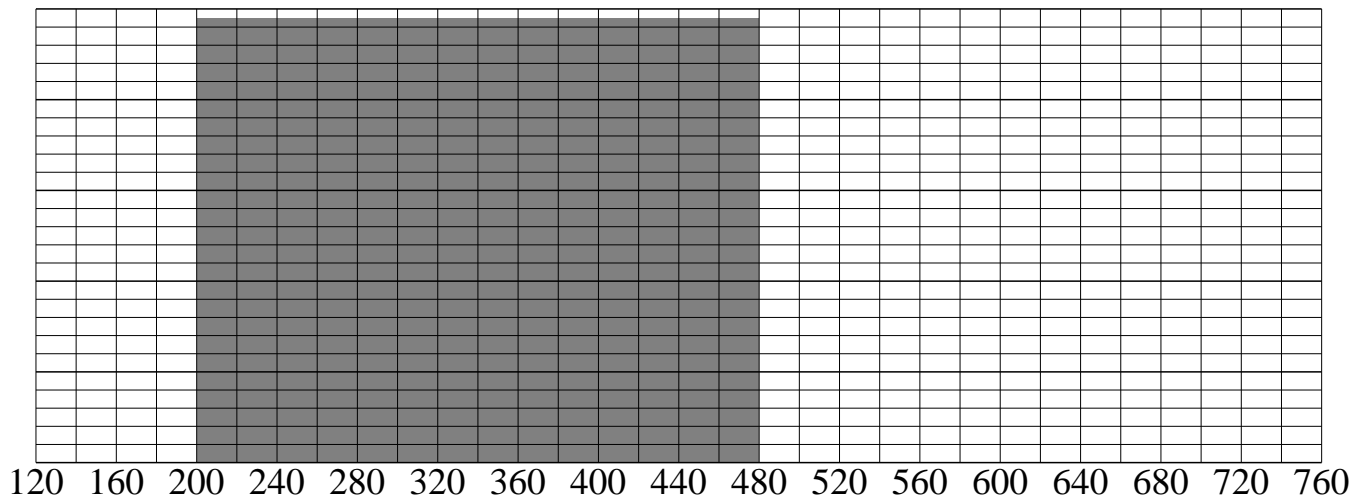


5: Complete the table and the histogram:

a) volume (cm <sup>3</sup> )	3.2 – 3.6	3.6 – 5.6	5.6 – 6.4	6.4 – 8.4	8.4 – 9.2
frequency		6			24.8



b) width (mm)	120 – 200	200 – 400	400 – 480	480 – 640	640 – 760
frequency	176	980		368	360



# Answers: DEMO Data Handling Questions

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1: a)

area (cm <sup>2</sup> )	Cum Freq
$A \leq 10$	<b>1</b>
$A \leq 20$	<b>9</b>
$A \leq 30$	<b>27</b>
$A \leq 40$	<b>49</b>
$A \leq 50$	<b>60</b>

b)

area (m <sup>2</sup> )	Cum Freq
$A \leq 50$	<b>18</b>
$A \leq 60$	<b>50</b>
$A \leq 70$	<b>74</b>
$A \leq 80$	<b>83</b>
$A \leq 90$	<b>84</b>

c)

mass (kg)	Cum Freq
$m \leq 30$	<b>7</b>
$m \leq 40$	<b>24</b>
$m \leq 50$	<b>40</b>
$m \leq 60$	<b>50</b>
$m \leq 70$	<b>52</b>

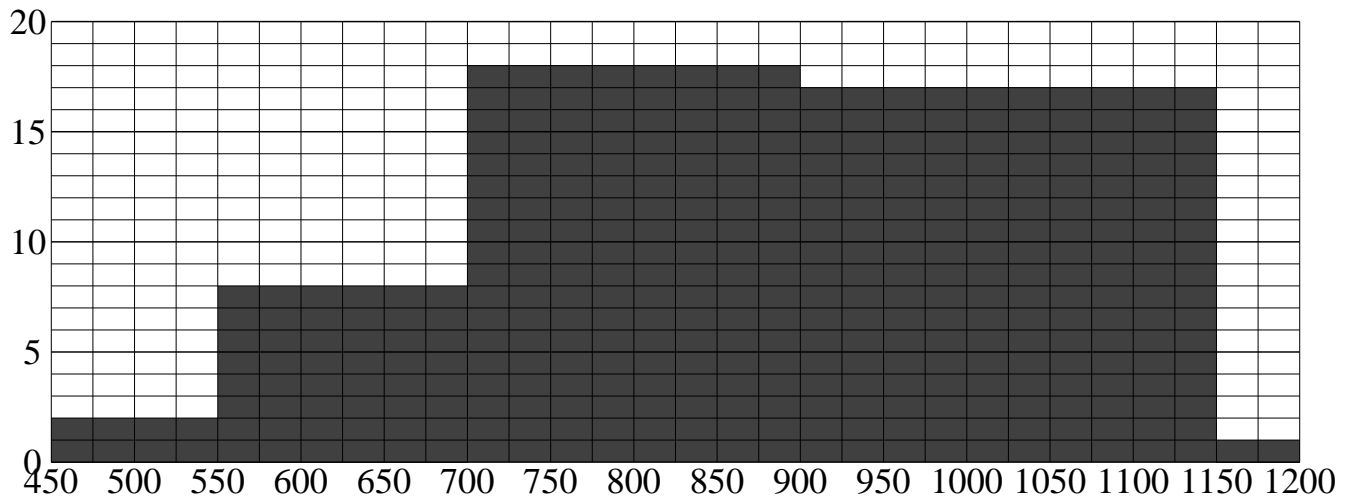
d)

length (cm)	Cum Freq
$l \leq 60$	<b>2</b>
$l \leq 70$	<b>13</b>
$l \leq 80$	<b>35</b>
$l \leq 90$	<b>60</b>
$l \leq 100$	<b>72</b>

2: a) 22 – 24    b) 15 – 16    c) 26 – 27    d) 37 – 38    e) 27 – 28    f) 9 – 11

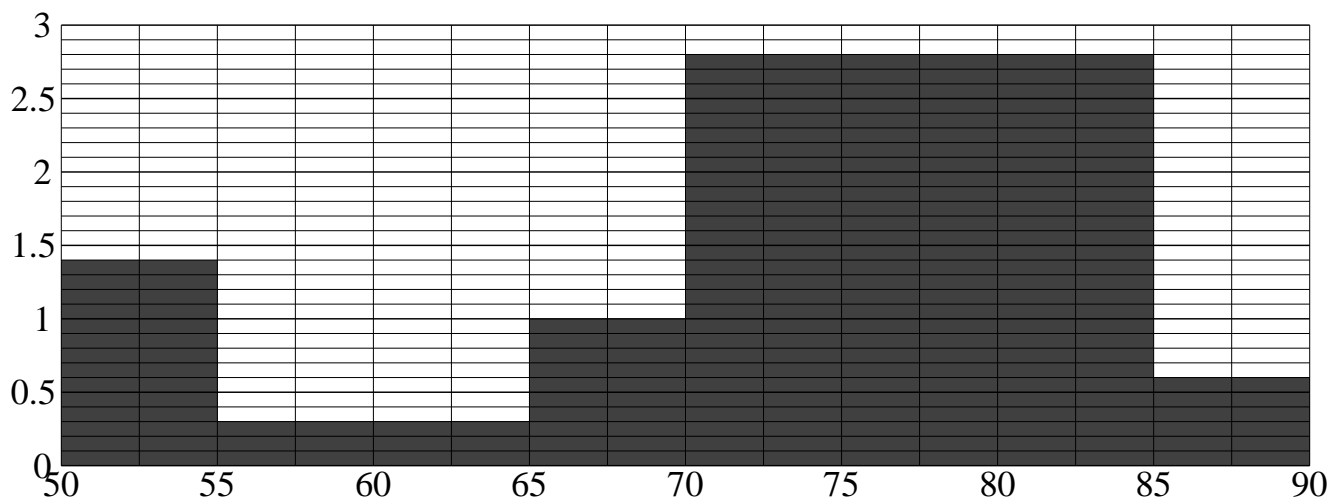
3: a)

age (years)	450 – 550	550 – 700	700 – 900	900 – 1150	1150 – 1200
frequency	200	1200	3600	4250	50
freq. density	2	8	18	17	1



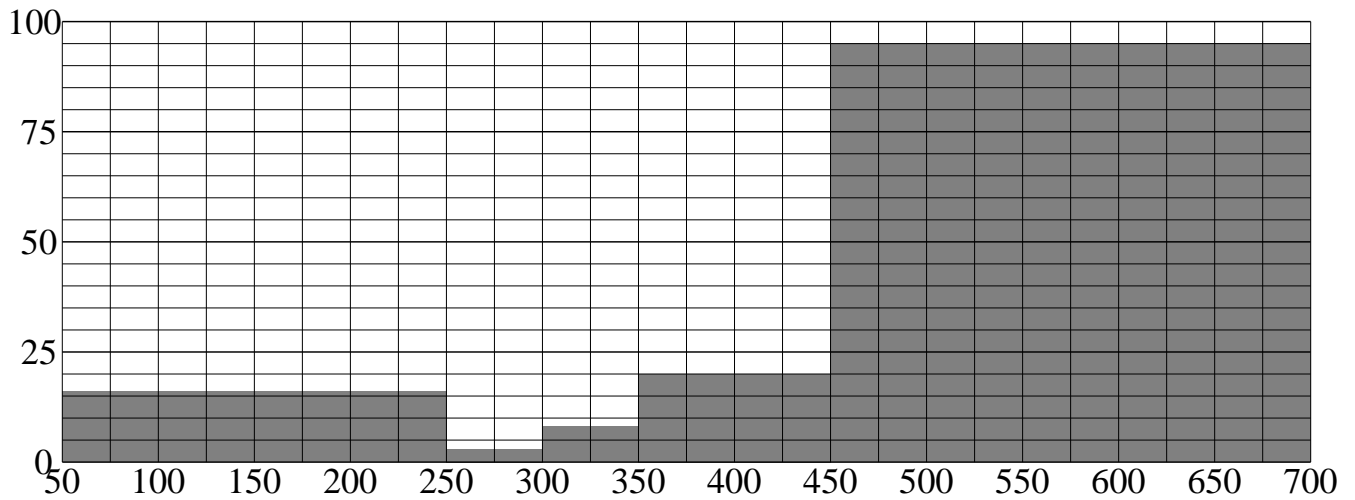
b)

diameter (cm)	50 – 55	55 – 65	65 – 70	70 – 85	85 – 90
frequency	7	3	5	42	3
freq. density	1.4	0.3	1.0	2.8	0.6



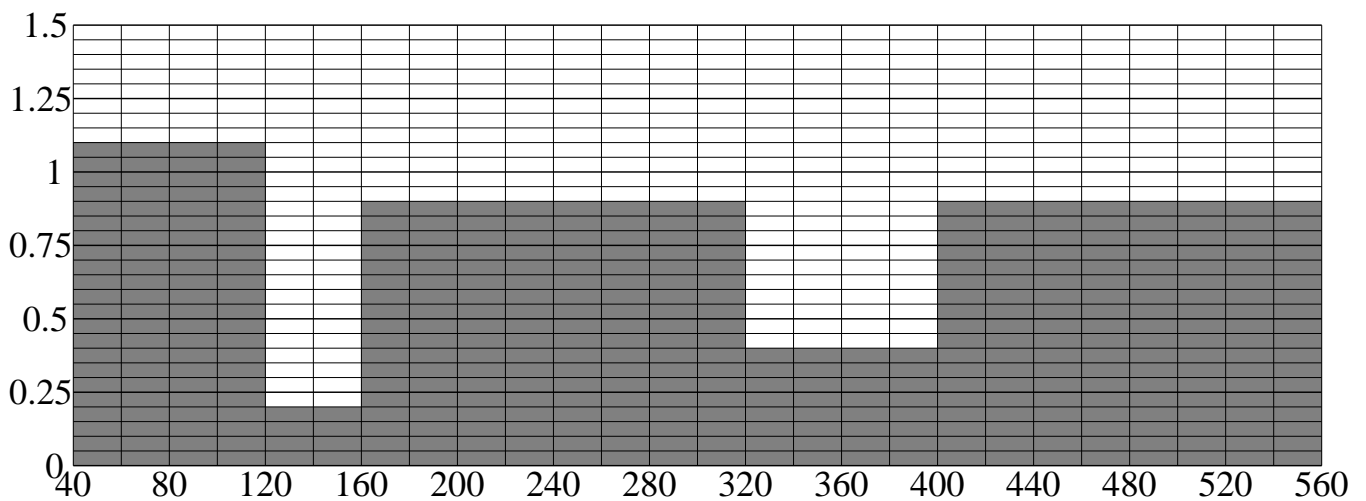
4: a)

time (min)	50 – 250	250 – 300	300 – 350	350 – 450	450 – 700
frequency	<b>3200</b>	<b>150</b>	<b>400</b>	<b>2000</b>	<b>23750</b>
freq. density	16	3	8	20	95



b)

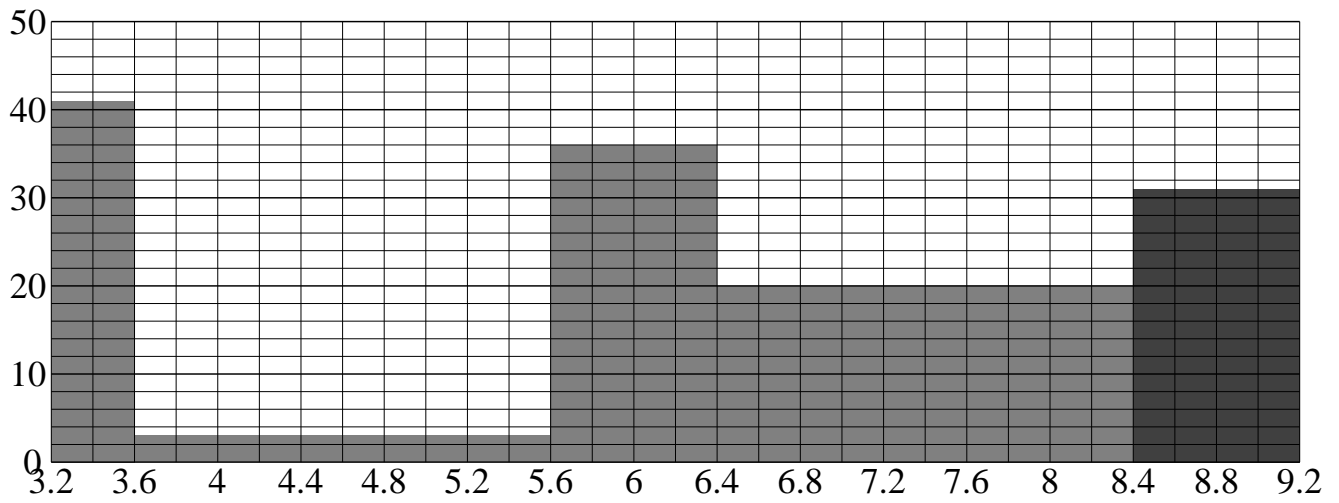
volume (m <sup>3</sup> )	40 – 120	120 – 160	160 – 320	320 – 400	400 – 560
frequency	<b>88</b>	<b>8</b>	<b>144</b>	<b>32</b>	<b>144</b>
freq. density	1.1	0.2	0.9	0.4	0.9





5: a)

volume (cm <sup>3</sup> )	3.2 – 3.6	3.6 – 5.6	5.6 – 6.4	6.4 – 8.4	8.4 – 9.2
frequency	<b>16.4</b>	6	<b>28.8</b>	<b>40</b>	24.8
freq. density	41	3	36	20	31



b)

width (mm)	120 – 200	200 – 400	400 – 480	480 – 640	640 – 760
frequency	176	980	<b>392</b>	368	360
freq. density	2.2	4.9	4.9	2.3	3.0

