These Exercises are related to the Data Literacy Class.

Any files referenced are located in the Resources folder

Example 1 Probability (from Everyday Data)

1. *What is the probability of throwing 1 dice and getting*
   a. *3*
   b. *Odd number*

2. *What is the probability of throwing 2 dice and getting*
   a. *A double*

3. *What is most likely total number from two dice?*

Dice Number	1	2	3	4	5	6
1	2	3	4	5	6	7
2	3	4	5	6	7	8
3	4	5	6	7	8	9
4	5	6	7	8	9	10
5	6	7	8	9	10	11
6	7	8	9	10	11	12

4. *What is the probability of getting the most likely number from question 3. above?*

5. *Using Excel and the RANDBETWEEN function simulate the throwing of 2 dice, adding up the values and displaying the most frequent number that occurs for*
   a. *10 throws*
   b. *100 throws*
   c. *1,000 throws*
   d. *10,000 throws*
   e. *100,000 throws*
   What can you say about this simulation?

6. *From your sample throws create a chart that shows the distribution of the values*
   What can you say about the "shape" of this distribution?

Example 2 Averages (from Everyday Data)

1. You are organising a children's party and all you know is the average age of the children is 8. What entertainment do you organise?

On the day of the party 7 children turn up and their ages are in ascending order

2, 3, 4, 9, 13, 13 and 13

Have you made a mistake with the entertainment you've organised?

What additional information would have been useful and if you had this information what entertainment would you have organised?

2. The following is a sample of student's pulse rates

Pulse-rate (beats per minute) of Students				
89	68	92	74	76
85	64	79	77	96
82	81	86	71	90
77	90	83	81	73
82	88	79	79	94
65	77	83	75	87
80	70	85	80	80
87	71	72	62	78
80	78	81	81	75
82	66	78	74	72

a. If your pulse rate is 74 beats per minute would that seem slower or faster than most of the learner's pulse-rates?

b. Now with the same sample sorted what would be your answer?

Pulse-rate (beats per minute) of Students				
62	64	65	66	68
70	71	71	72	72
73	74	74	75	75
76	77	77	77	78
78	78	79	79	79
80	80	80	80	81
81	81	81	82	82
82	83	83	85	85
86	87	87	88	89
90	90	92	94	96

Example 3

What would be the most useful average for the following data?

Method of Transport	Number of students
Cycle	15
Foot	12
Bus	9
Motor-cycle	6
Car	5
Train	3
TOTAL	50

What would be the best average for the following two sets of salaries?

X	£30,000.00	£38,000.00	£42,000.00	£57,000.00	£73,000.00
Y	£30,000.00	£38,000.00	£42,000.00	£55,000.00	£244,000.00

Example 4 Data Types

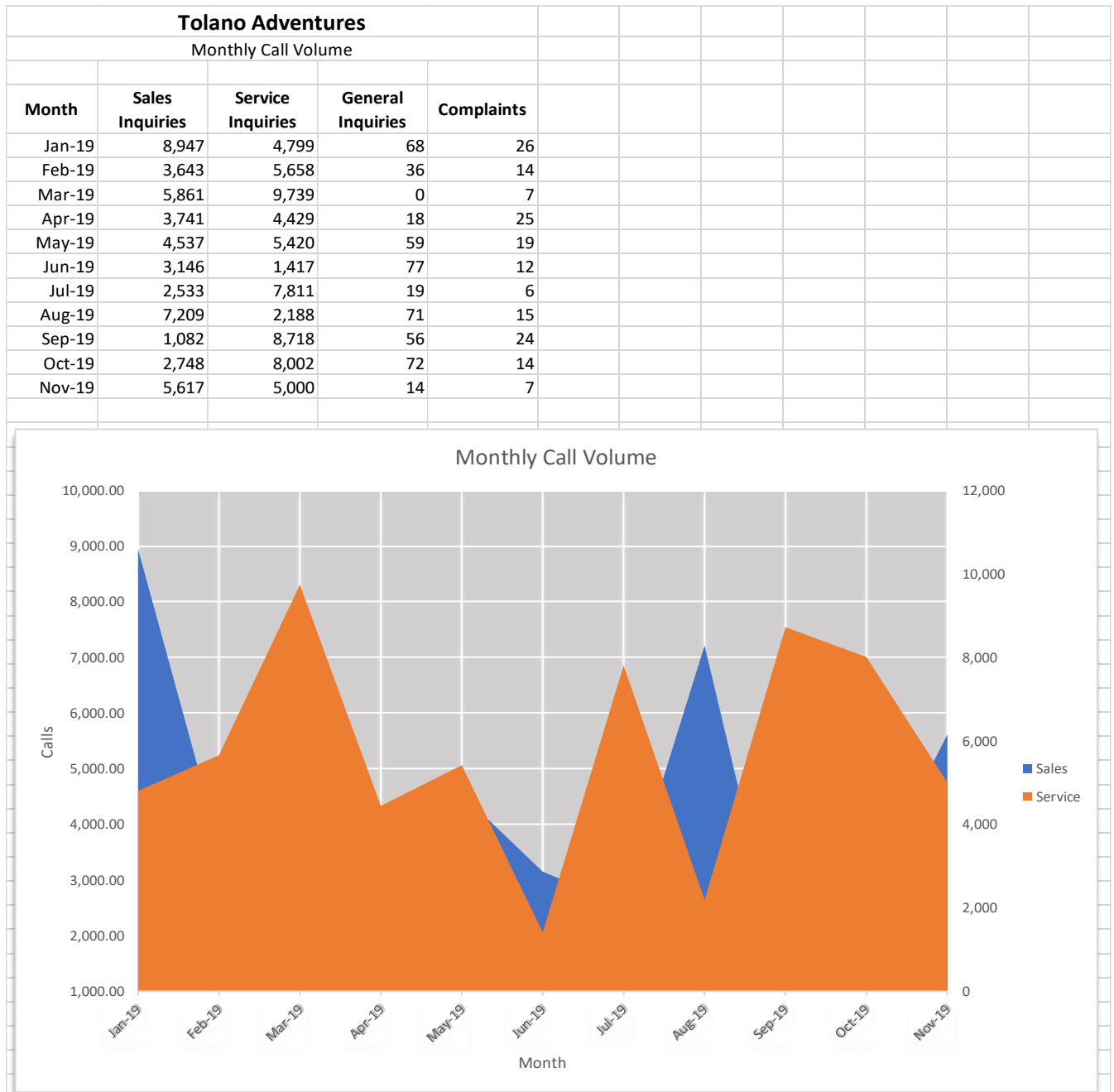1. *Using the Example.csv file identify at least 1 of the following*

- *Qualitative Value*
    a. *Your chosen value is it Nominal or Ordinal?*

- *Quantitive Value*
    a. *Discrete*

    b. *Continuous*

Example 5 Visualisations

1. Chose a chart that best shows the heights of the class.

2. Using the data from the csv file SamplePulseRates.csv choose a chart that best shows the information.

Example 6 Visualisations

Using the following example Visualisation list as many things you think are wrong?

Tolano Adventures										
Monthly Call Volume										
Month	**Sales Inquiries**	**Service Inquiries**	**General Inquiries**	**Complaints**						
Jan-19	8,947	4,799	68	26						
Feb-19	3,643	5,658	36	14						
Mar-19	5,861	9,739	0	7						
Apr-19	3,741	4,429	18	25						
May-19	4,537	5,420	59	19						
Jun-19	3,146	1,417	77	12						
Jul-19	2,533	7,811	19	6						
Aug-19	7,209	2,188	71	15						
Sep-19	1,082	8,718	56	24						
Oct-19	2,748	8,002	72	14						
Nov-19	5,617	5,000	14	7						

*Using the WorkBook **ExercsieBadVisualisation**.xlsx change as many of the things you listed to improve its appearance.*

Example 7 Decision Making & Drawing Conclusions

TBA