Numeracy Revision

1.   The population of Edinburgh is increasing at a steady rate of 1.8% per annum.

     The population is 495 000 at present. What is the expected population in four years' time?

     Give your answer correct to three significant figures.   (4)

2.   Chloe bought a flat in Dundee costing £103 500. It depreciated in value by 2·3% for each of the next 3 years.

     How much is Chloe's flat now worth? *Give your answer to two significant figures.*   (4)

3.   An Easter egg manufacturer produces a chocolate egg which weighs 260 grams. The weight of the Easter egg box and packaging is 78 grams.
     To transport the Easter eggs they are packaged in trays of 68 boxes. A retailer orders 40 trays of the Easter eggs. The manufacturer's delivery van can take a maximum load of 1 tonne.

     Can the retailers order be delivered in one van load?
     Use your calculations to justify your answer.

     (2)

4.   The McNeill family were on holiday in Spain.
     At the start of their holiday they change £1200 into Euros. The rate of exchange is £1 = 1.37 Euros.
     While in Spain they spent 1536 Euros.
     They have returned home and want to change their remaining Euros back into pounds Sterling.
     The exchange rate is now £1 = 1.42 Euros.

     How much will they get for their remaining Euros? (The bank will only change the money in multiples
     of 10 Euros).   (4)

5.   (a) The Eurostar train leaves Paris, France at 1127 local time and arrives
     in London, Great Britain at 1308 local time. The time in Britain is one hour behind the time in France.
     How long did the train journey take?   (2)

     (b)There are three types of seats available on the Eurostar train: Standard, Standard Premier and Business Premier.
     Fares (in euros) for 1 adult are shown in the table.

Standard		Standard Premier		Business Premier
Non- flexible	Semi- flexible	Non- flexible	Semi- flexible	Fully flexible
€207·50	€220	€240·50	€262	€329

     Children up to age 12 pay 70% of the adult fare.

     Travel insurance is available for   €40 per person. A 6 euro fee will be added to all credit card transactions.

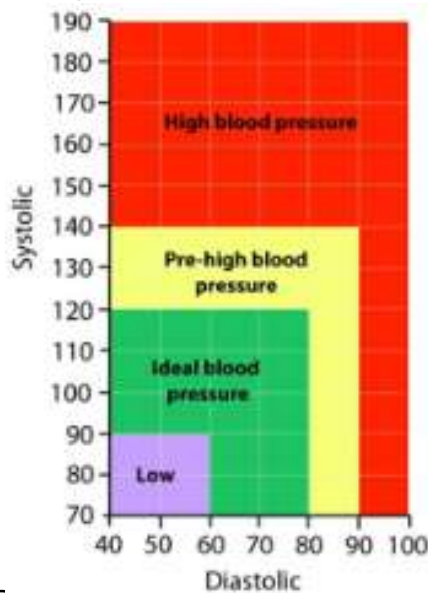   Children up to age 12 pay 50% of the insurance premiums.

     Mr and Mrs Dubois and their two children aged 6 and 11 want to travel from Paris to London on the Eurostar train. They decide to buy Standard, semi- flexible tickets. They also buy travel insurance

for all four people in their party. They pay by credit card. They have budgeted 800 euros for travel costs.

Have they budgeted enough for travel costs?   (4)

6.   The blood pressure chart shows ranges of high, low and healthy blood pressure readings.

Blood pressure chart for adults

David has his blood pressure taken. The Diastolic and Systolic results are shown below.

Explain what this tells David about his blood pressure.

7.   In class 2A it was found that $\frac{1}{4}$ of the pupils walk to school and $\frac{2}{3}$ come by bus or car.

The rest of the pupils cycle. What fraction of the pupils cycle to school?
(2)

8.   For the commonwealth games closing ceremony there were three categories of seat available.
        Type X seats were the cheapest, type Y seats the middle price and type Z seats the most expensive.
        The most expensive seats at the ceremony were £90.

The ratio of seat prices was X : Y : Z = 3 : 5 : 9.

a) What is the price of each type of seat?   (2)

b) The ratio of the number of each type of seat was X : Y : Z = 4 : 3 : 1.
There was a sell out crowd of 48 000 tickets.
Calculate the total amount taken in ticket sales.
(2)

9.   A retailer orders tins of soup in boxes of 80.
        The probability of a box containing at least one bashed tin is 0·012.
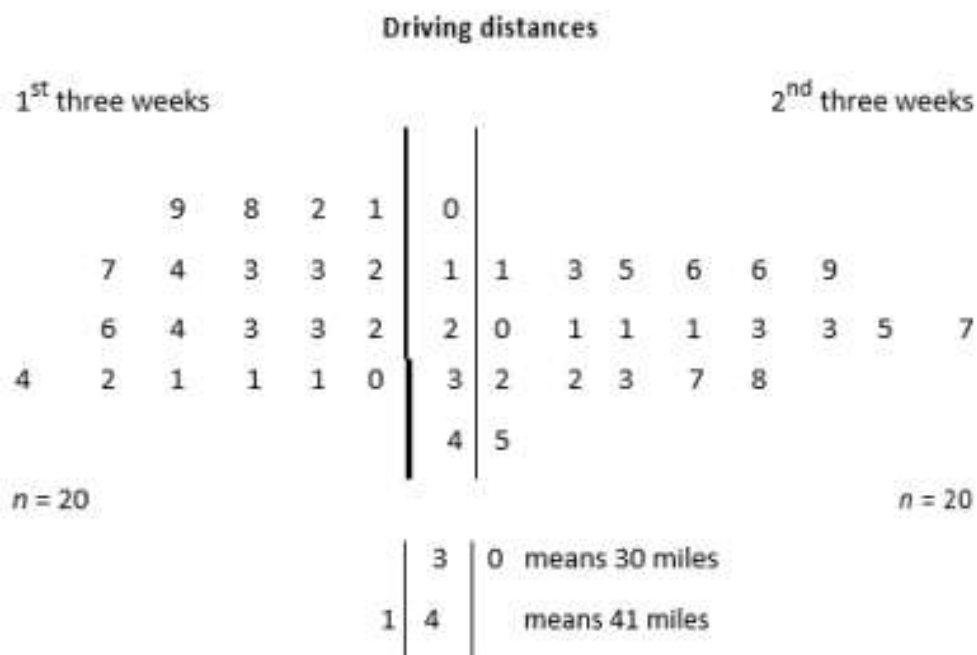
The retailer finds that in a delivery of 10 boxes of soup, 12 tins contained at least one bash.

Is this more or less than expected? Use your working to explain your answer.
(2)

10. Before buying a car, Lee recorded how far she drove in six weeks on a daily basis.

The back- to- back stem- and- leaf diagram below shows how far Lee drove each day in the first three weeks, and second three weeks.

Driving distances

1st three weeks   2nd three weeks

9	8	2	1	**0**								
7	4	3	3	2	**1**	1	3	5	6	6	9	
6	4	3	3	2	**2**	0	1	1	1	3	3	5	7
4	2	1	1	1	0	**3**	2	2	3	7	8		
					4	5						

n = 20   n = 20

3	0	means 30 miles
1	4	means 41 miles

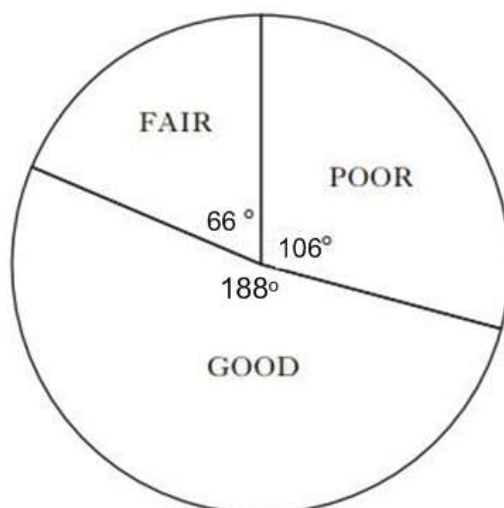(a) For the second three weeks of driving calculate the mean distance.
(1)

(b) For the first three weeks of driving the mean distance was 19·8.
Comment on the distances driven in the first three weeks and the second three weeks.
(1)

11. The pie chart shows the results of a customer satisfaction survey carried out by Red Talk Media, a broadband service provider, in 2012.

FAIR

POOR

66 °

106°

188°

GOOD

693 customers said they felt the service was fair.
Calculate the number of customers that said the felt the service was good.
(3)