

(Justify your answer by calculation)

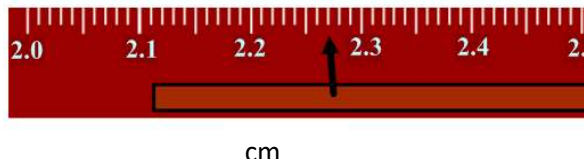
### National 5 Numeracy (National 5)

#### Practice Assessment 2

1. James bought a Rolls Royce and paid £56000 for it.  
If it is expected to increase by 5.2% each year, how much will it be worth after 3 years?  
Give your answer correct to **2 significant figures**.
2. On Friday  $\frac{4}{7}$  of Parkden Secondary school chose pasta for lunch,  $\frac{1}{5}$  chose pizza and the rest chose salad. What fraction of the pupils chose salad?
3. A factory produces light bulbs. The probability of a bulb being faulty is 0.005. In a box containing 400 light bulbs, 3 were found to be faulty. Is this more or less than expected?

**Justify your answer by calculation**

4. What are the readings on these scales?



- 5.

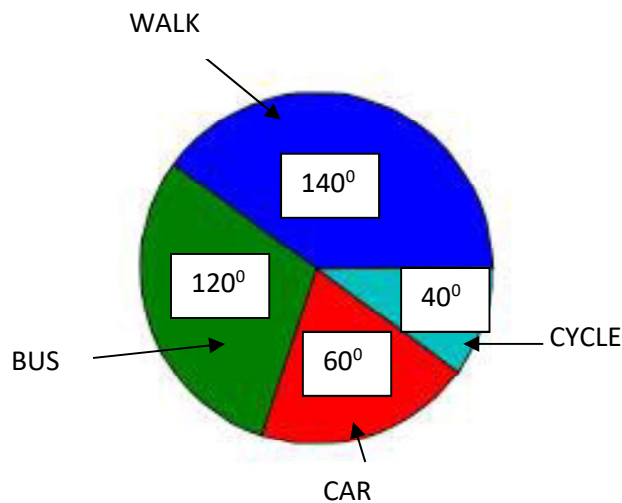
#### **Resting Heart Rate for MEN**

	Age	18-25	26-35	36-45	46-55	56-65	65+
Athlete		49-55	49-54	50-56	50-57	51-56	50-55
Excellent		56-61	55-61	57-62	58-63	57-61	56-61
Good		62-65	62-65	63-66	64-67	62-67	62-65
Above Average		66-69	66-70	67-70	68-71	68-71	66-69
Average		70-73	71-74	71-75	72-76	72-75	70-73
Below Average		74-81	75-81	76-82	77-83	76-81	74-79
Poor		82+	82+	83+	84+	82+	80+

Liam is 37 years old and has a resting heart rate of 73. What does this tell about his heart rate?

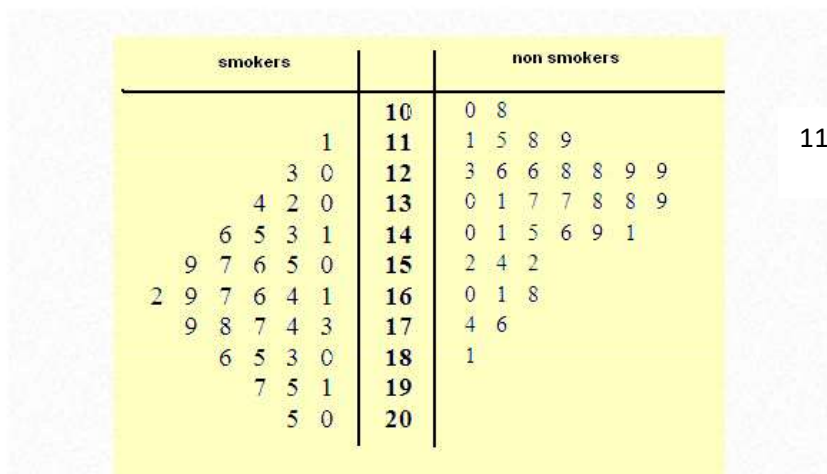
6. a) Three farmers Bill, Bob and George decided to split a herd of cows in the ratio 3 : 2 : 1
- (i) If George got 12 cows how many did Bill and Bob each get?
- (ii) How many cows were in the herd altogether ?
- b) £ 80000 is shared between three schools in the ratio 2 : 3 : 5.  
How much did each school receive?

7.



A survey of all S1 – S6 pupils in Rosstown school was carried out to find out how they travelled to school. If 180 pupils said they come by car, how many said they walk to school?

8. The back to back stem and leaf diagram below shows the cholesterol levels (mg/dL) of two groups of people – smokers and non smokers



11 / 8 means 118

n = 35

n = 35

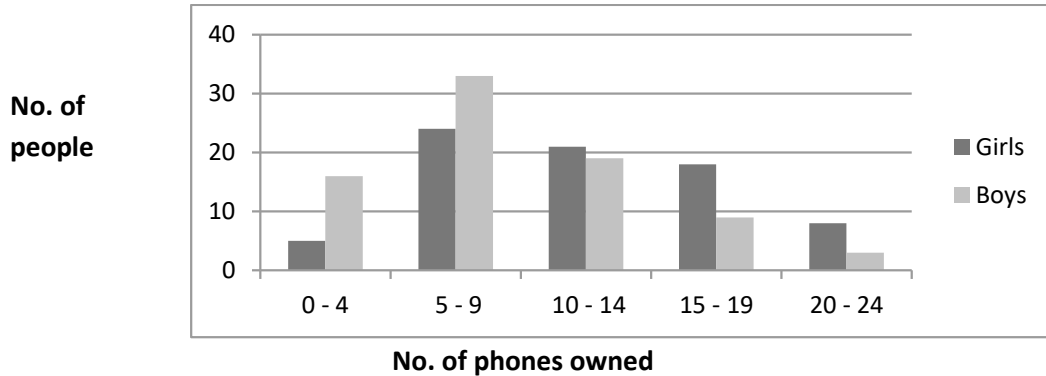
- a) People with a cholesterol level of 160 or more are said to have a high cholesterol level. Which group has more people with a high level of cholesterol?

- b) People with a cholesterol level of 129 or less are said to have a near ideal level of cholesterol. Which group has more people with a near ideal level ?

**JUSTIFY YOUR ANSWER**

9.

**Mobile phone ownership**



- a) In which categories did the girls outnumber the boys?  
 b) Estimate how many phones were owned by boys altogether  
 c) What does the graph tell about the difference in mobile phone ownership between girls and boys?

10. In a normal week the school cafeteria vending machines dispense 140 bottles of orange, 250 bottles of mineral water and 450 bottles of cola.

The capacity of each bottle is shown in the table.

Orange	275 ml
Water	330 ml
Cola	425 ml

- a) Calculate the volume of drinks dispensed in a normal week  
 b) If 1 litre of liquid weighs 1 kg and each bottle weighs 50g, what is the total weight of drinks dispensed in a normal week?  
 c) If each vending machine is designed to hold up to 200kg, how many vending machines are needed to store this number of drinks?

**(Use your calculations to explain your answer)**

11. Stephen is going to Amsterdam on a 5 day break. He changes £850 into Euros.

- a) If the **rate of exchange is £1 = 1.17 Euro**, how many Euros will he receive?  
 b) During his holiday, Stephen spent 725 Euros. How many Euros does he have left?  
 c) Stephen changes the remaining Euros back into pounds. If the rate of exchange has stayed the same, how much will he get to the nearest pound?

12.

- a) A train leaves Inverness at 1558 and arrives at John O'Groats at 1813. How long did the journey take?

- b) Chris flew from London to Istanbul. The plane left at 1421 local time and arrived in Istanbul at 2013 local time. If the time in Istanbul is two hours ahead of the time in Britain, how long was the flight?

13.

Mr and Mrs Welsh and their two children have booked an all inclusive holiday to the Sunbeach hotel for 11 nights and will **fly from Edinburgh** on 18<sup>th</sup> July

<b>Sunbeach Hotel (All inclusive prices)</b>									
Prices are in £'s per person									
Nights	Adult							1 <sup>st</sup>	2 <sup>nd</sup>
								Child	Child
	04 – 17 Jun	18Jun – 01 Jul	02 – 08 Jul	09 – 16 Jul	17 Jul- 20 Aug	21 – 25 Aug	26 Aug 08 Sep		
<b>7</b>	1049	1059	1085	1219	1419	1409	1109	539	325
<b>10</b>	1325	1329	1365	1605	1785	1745	1369	639	339
<b>11</b>	1405	1429	1455	1735	1915	1825	1505	639	339
<b>14</b>	1675	1685	1759	2095	2289	2119	1705	769	325
<b>Surcharges : Flights from Edinburgh £ 50 per person</b> <b>Payment by credit card : £ 24</b>									

<b>Travel Direct Holiday Insurance (10 – 14 days)</b>				
	Budget	Standard	Premier	Premier Plus
<b>Family 2 adults/ 2 children</b>	£ 33.42	£ 42.12	£ 54.08	£ 91.11

- a) If Mr and Mrs Welsh decide to pay for Premier Holiday insurance and pay the holiday by credit card, how much is the holiday going to cost altogether?
- b) They were hoping to spend no more than £5000 on the holiday. Were they successful?  
**(You must justify your answer)**