

## National 5 Lifeskills Managing Finance and Statistics Practice

- 1)  $\frac{5}{7}$  of the cars in a car park were grey. If there were 560 cars altogether, how many of them were grey?
- 2) In a year group of 152 pupils,  $\frac{3}{8}$  of the pupils are girls.  
How many girls are in the class? How many boys are in the class?
- 3) There are 500g of sugar in a bag. For a recipe,  $\frac{7}{10}$  of the bag is required. How much sugar is used in the recipe? How much sugar is left in the bag?
- 4) A motorway is 765 miles long. For  $\frac{4}{9}$  of the motorway there are three lanes of traffic. What length of motorway has three lanes of traffic? What length of motorway **does not** have three lanes of traffic?
- 5) A packet of crisps weighs 30g. Special offer packs give 40% extra free. What weight of crisps do you get in a packet now?
- 6) CutscoCash'n'Carry charge VAT at the rate of 20%. Calculate the cost including VAT on the following goods :  
**(a)** £100      **(b)** £30      **(c)** £50      **(d)** £70
- 7) Each day 35% of a local deli's takings is spent on electricity, rent and other outgoings. Wages are then an additional expense. Last Monday the deli took £260 and the wages for the shop were £75.  
a) What was the net profit of the deli on Monday?  
b) Last Friday the takings were £485 however the wages were £155. Was the net profit more or less than on Monday?
- 8) The following table shows the hours of sunshine and rainfall, in mm, in towns during last summer. Draw a scattergraph for the information

Sunshine (hours)	650	455	560	430	620	400	640	375	520	620
Rainfall (mm)	10	20	15	29	24	28	14	30	25	20

Draw a best line of fit and estimate.

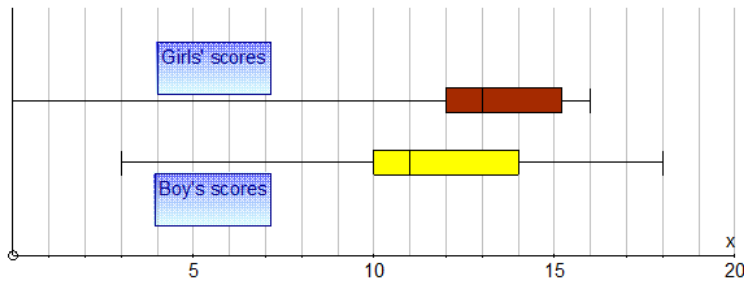
- a) How many hours of sunshine a town would expect if it had 22mm of rain.
  - b) How much rainfall would a town expect who had 580hours.
- 9) Ten men took part in a long jump competition.  
The table shows the heights of the ten men and the best jumps they made.

Best jump (m)	5.33	6.00	5.00	5.95	4.80	5.72	4.60	5.80	4.40	5.04
Height of men (m)	1.70	1.80	1.65	1.75	1.65	1.74	1.60	1.75	1.60	1.67

Make a scattergraph and draw a best line of fit.

- a) Estimate how high a man might jump if he was 1.72m tall.
- b) Estimate the height of a man whose best jump was 5.55m.

- 10) A school is entering a pupils team for a general knowledge competition. A teacher has narrowed it down to two teams. A Girls and a Boys. Over several weeks the teams took part in several quizzes, each out of 20 marks. From the information below which team would give the school the best chance in the competition.



	Boys	Girls
Range	$18 - 3 = 15$	$16 - 0 = 16$
Median	11	12
Lower Quartile	10	12
Upper Quartile	14	15.2
IQR = UQ - LQ	$14 - 10 = 4$	$15.2 - 12 = 3.2$

- 11) Below is the household monthly balance sheet for the Smiths

Income		Expenditure	
Mr Smith's Wages	£910	Mortgage	£728
Mrs Smith's Wages	£678	Electricity/Gas	£116
		Council Tax	£148
		Phones	£85
		Food	£280
		Car Cost	£140
		Trips etc	£80

- Are the Smith's balancing their budget? Do they have a surplus or deficit?
- Due to the base interest rate of their mortgage increasing by 5% do the Smiths have to re-evaluate their budget?
- If Mrs Smith, who only works 4 days a week, increased her hours to full time (5 days a week) what affect would this have on their budget?

12) Complete the table

	Cost (excl.VAT)	VAT	Total Cost
Coat	£128.80		
32" LCD Television	£310		
Fishing Rod	£12.50		
24 Speed Bicycle	£270		
Trainers	£72		
Fishing Reel	£55.50		

13)

There are 2 red balls, 3 green balls and 5 blue balls in a bag.

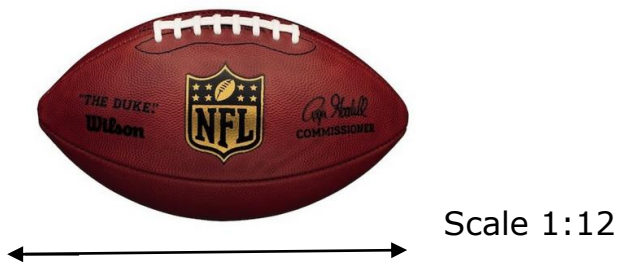
- What is the probability of choosing a green ball at random?
- What is the probability of NOT choosing a green ball?
- What is the probability of choosing a red ball or a blue ball?
- What is the probability of choosing a blue ball, returning it to the bag and choosing a second blue ball?

14) Draw a probability tree for rolling fair dice twice and landing on a square number.

- What is the probability of not getting a square number on the 1<sup>st</sup> roll?
- What is the probability of not getting a square number on either roll?
- What is the probability of landing on a square number on the 1<sup>st</sup> roll and then not a square number on the 2<sup>nd</sup> roll?
- Is it more likely that you would 2 square numbers or 2 non square numbers?

15) Measure the marked dimension of each of the objects to the nearest mm and use the scale to say how large each would be in real life

a)



b)



Scale 1:30

16)

A machine is used to put drawing pins into boxes.

A sample of 8 boxes is taken and the number of drawing pins in each is counted.

The results are shown below:

102    102    101    98    99    101    103    102

(a) Calculate the mean and standard deviation of this sample.

(b) A sample of 8 boxes is taken from another machine.

This sample has a mean of 103 and a standard deviation of 2.1.

Write down two valid comparisons between the samples.

17) A house is worth £82000 in 2016. It is expected to appreciate 7% each year until 2019. Calculate the value in 2019

18)

Make a stem and leaf diagram for the following data.

Boys hand span in cm

22, 24, 18, 17, 23, 22, 28, 19, 20

What is the median, modal and mean values?