Holiday Money (1)

The following questions use this table of exchange rates, which gives the amount of each currency you will receive in exchange for £1.

Country	Currency	Rate per £
USA	Dollars ($)	$1.55
JAPAN	Yen (¥)	150 ¥
EUROZONE	Euros(€)	1.16 €
AUSTRALIA	Dollars ($)	1.7 $

1. Change each of the following amounts into USA dollars:

(a) £5 **(b)** £31 **(c)** £462 **(d)** £20

(e) £44 **(f)** £9 **(g)** £207 **(h)** £36

(i) £65 **(j)** £4.50 **(k)** £85.50 **(l)** £17.50

2. Change each of the following amounts into **(i)** Euros

(ii) Yen :

(a) £4 **(b)** £49 **(c)** £185 **(d)** £30

(e) £27 **(f)** £7 **(g)** £304 **(h)** £52

(i) £83 **(j)** £10 **(k)** £0.50 **(l)** £18.50

3. Change each of the following amounts into Australian dollars:

(a) £6 **(b)** £57 **(c)** £19 **(d)** £206

(e) £135 **(f)** £23 **(g)** £2 **(h)** £77

(i) £34 **(j)** £480 **(k)** £0.50 **(l)** £29.50

4. Maria and Vicki are going on a school trip to Europe. Maria has saved £110 spending money and Vicki has saved £94. How much will they each get when they change their money into Euros?

5. Martin is travelling to America on a business trip. He changes £550 into dollars before he goes.

(a) How many dollars does he receive?

(b) If he spends $800 how any dollars will he have left?

6. Carol is going on holiday to Japan with her parents. She takes £75 of her savings to the bank to change into yen.

(a) How many yen does she receive?

(b) At the end of her holiday she has 1420 yen left. How many yen did she spend?

Holiday Money (2)

The following questions use this table of exchange rates which gives the amount of each currency you will receive in exchange for £1.

Country	Currency	Rate per £
ICELAND	Kroner (k)	120 k
SWITZERLAND	Francs (f)	1.43 f
INDIA	Rupees (r)	94.55 r
CANADA	Dollars ($)	$1·60
SOUTH AFRICA	Rand (R)	15·2 R

1. Change the following amounts into pounds:

(a)	600 k	**(b)**	1920 k	**(c)**	4440 k	**(d)**	5640 k
(e)	7680 k	**(f)**	123600 k	**(g)**	25680 k	**(h)**	160800 k
(i)	5424 k	**(j)**	7572 k	**(k)**	131316 k	**(l)**	870 k

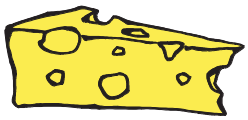
2. Change the following into pounds:

(a)	$ 48	**(b)**	$84	**(c)**	$432	**(d)**	$156
(e)	$ 1200	**(f)**	$2040	**(g)**	$4200	**(h)**	$22800
(i)	$ 3936	**(j)**	$1800	**(k)**	$12	**(l)**	$237.6

3. Change the following sums of money into pounds [Answer to nearest penny]:

(a)	490 r	**(b)**	245 r	**(c)**	58800 r	**(d)**	36750 r
(e)	25480 r	**(f)**	8820 r	**(g)**	3430 r	**(h)**	98000 r
(i)	2352 r	**(j)**	933 r	**(k)**	6076 r	**(l)**	441 r

4. Jean-Pierre is visiting some friends in England. He bought some presents in Geneva before he left home. The presents are shown below. How much did each item cost in pounds?

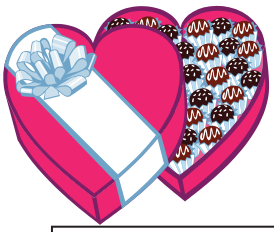


Swiss cheese

13·57 f

French wine

20.93 f



Chocolate

55·66 f

5. Riz has been on holiday in India. He comes home with 945 rupees. How much is this in pounds ?

6. Soraya changes £245 into Rand for a visit to South Africa.

(a) How many Rand does she receive?

(b) She spends 3344 Rand. How much does she have left?

(c) When she returns she exchanges her Rand. How many pounds will she get?

Measurements(length)

1. Write down 2 things that would be measured using:

(a) centimetres

(b) kilometres

(c) metres

(d) millimetres

2. What unit would you use to measure:

(a) the height of the classroom:

(b) the width of a 5p coin:

(c) the distance from the Earth to the Moon:

(d) the length of you arm:

3. The main instruments we use to measure length are:

ruler tape measure metre stick trundle wheel

Write down which one you would use to measure each of the following:

(a) the distance round a football pitch

(b) the length of a pair of trousers

(c) the width of your hand

(d) the length of your bedroom

4. Write down one more object that you would measure using:

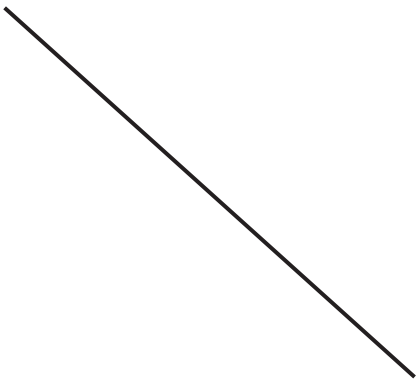
(a) a trundle wheel:

(b) a ruler:

5. Measure the length of these lines writing your answers in centimetres **and** in millimetres:

(a)

(b)

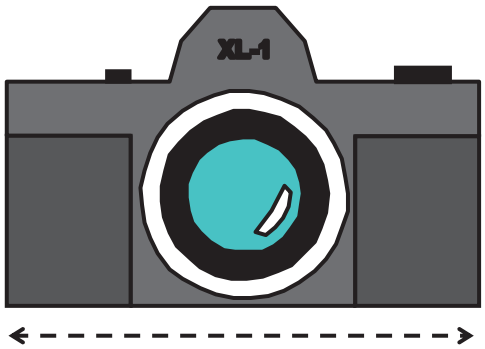


(c)

(d)

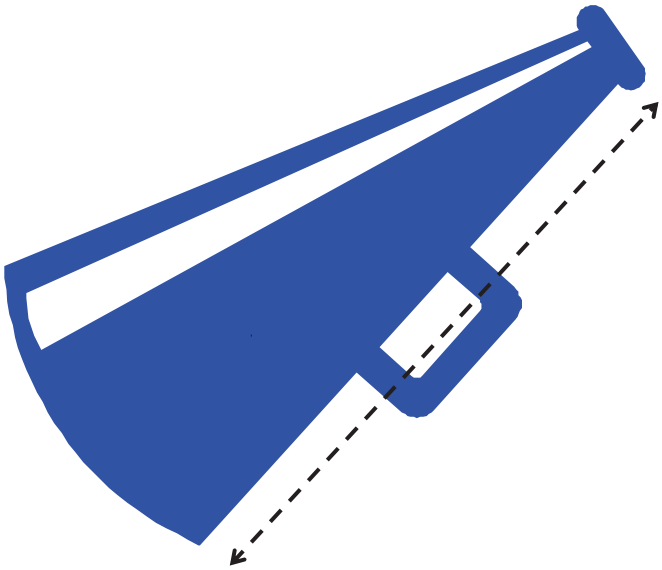
6. Measure these objects and write your answer in centimetres:

(a)

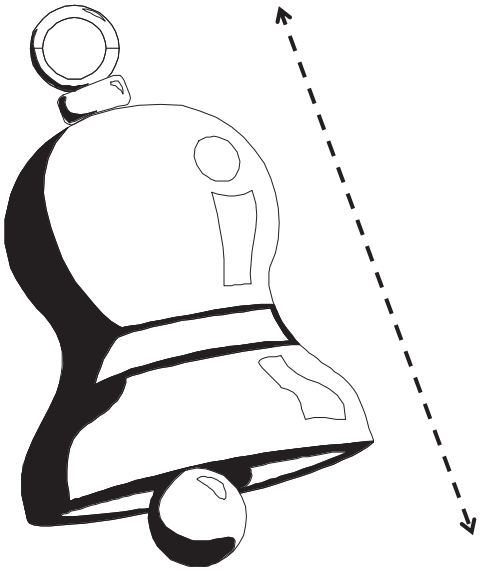


(b)

(c)



(d)



Measurements (volume and capacity)

1. Which unit would you use to measure the following:

Choose from:

Grams

Kilograms

Millilitres

Litres

(a) The weight of a bag of crisps.

(b) The volume of a car's petrol tank.

(c) The weight of a car.

(d) The volume of a medicine spoon.

2. Here are 5 items which all have different weights. Put them into order of weight starting with the one you think is the lightest:

(a) a football

(b) a golf ball

(c) a cricket ball

(d) a tennis ball

(e) a ten-pin bowling ball

3. Here are 5 containers. Put them in order of the amount of liquid they can hold starting with the one which you think holds the most:

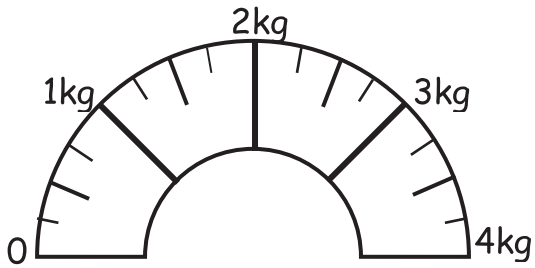
(a) a baby bath
(b) a cup of coffee
(c) a small bottle of perfume
(d) a kettle
(e) a car's petrol tank

<u>Measurements again</u> (you may write on parts of this sheet)

1. A bag of apples weighs 1·75kg.(A)

A tin of beans weighs 500g. (B)

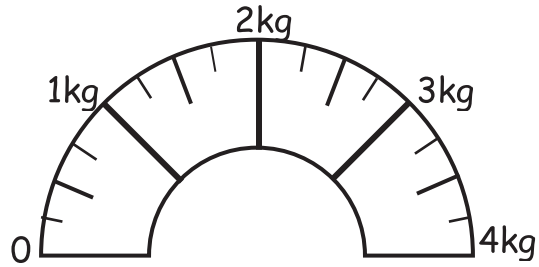
Mark these weights on the scales shown using the letters A and B.



2. A bag of sugar weighs 1kg. (C)

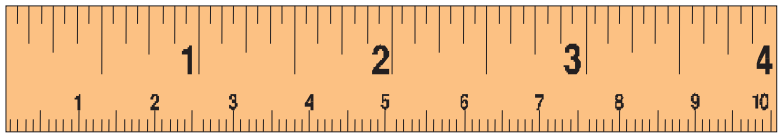
A pack of flour weighs 2500g. (D)

Mark these weights on the scales shown using the letters Cand D



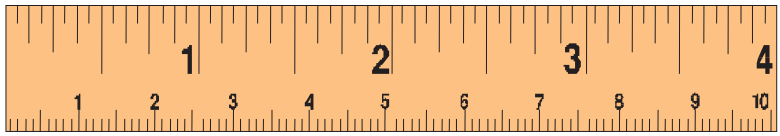
3. The width of my calculator is 6·7cm. (E) The length of my middle finger is 75mm. (F)

Mark these measurements on this ruler using the letters E and F.



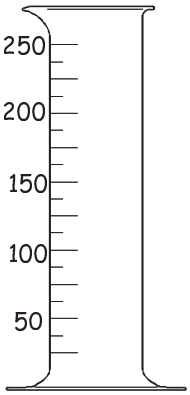
4. The width of a postcard is 9·5cm. (G) The length of a baby's foot is 77mm. (H)

Mark these measurements on this ruler using the letters G and H.



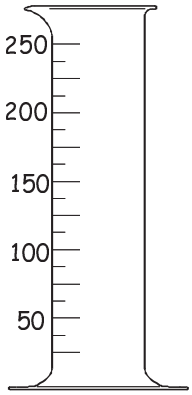
5. **(a)** Mr Jones told his Science class to measure 225ml of water.

Shade this measure to show 225ml.



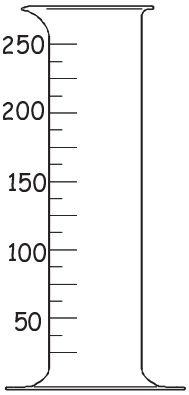
(b) A small can of juice holds 150ml.

Shade this measure to show 150ml.



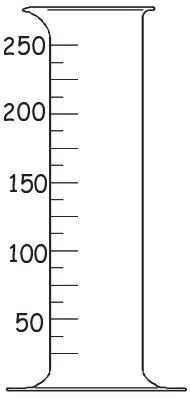
(c) Mr Kemp told his Science class to measure 25ml of water.

Shade this measure to show 25ml.

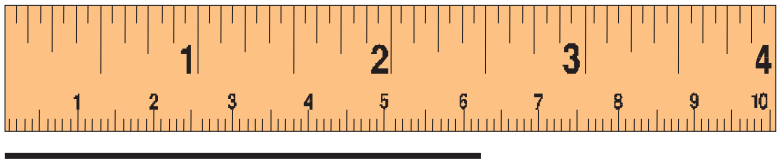


(d) A small up holds 175ml.

Shade this measure to show 175ml.



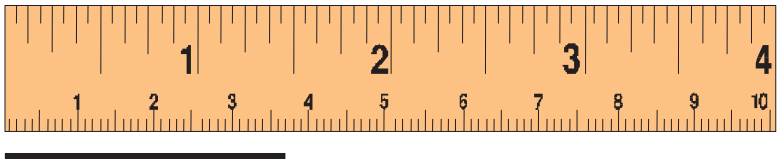
6. **(a)** Write down the length of this line:



(b) Extend the line so that is measures 9·2cm.

(c) What length of line have you added?

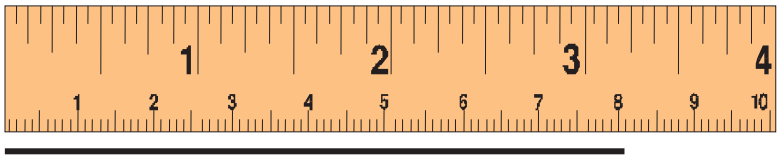
7. **(a)** Write down the length of this line:



(b) Extend the line so that is measures 7·3cm.

(c) What length of line have you added?

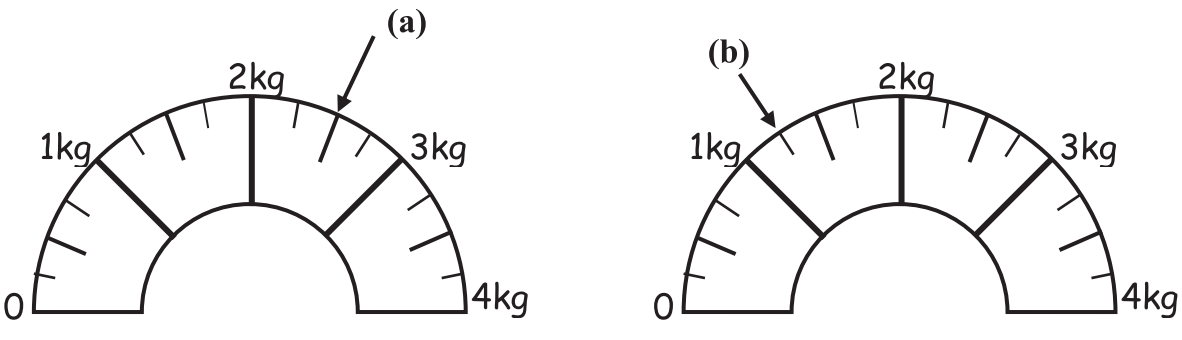
8. **(a)** Write down the length of this line:

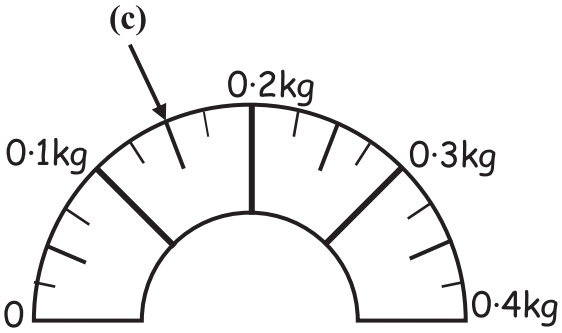


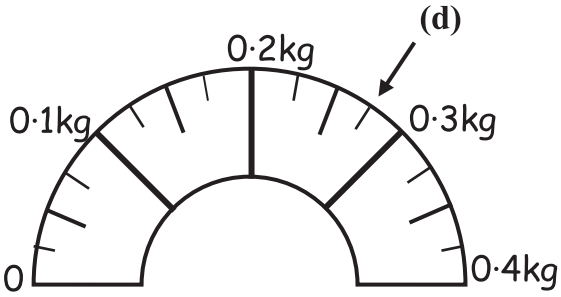
(b) Reduce the line so that is measures 2·6cm.

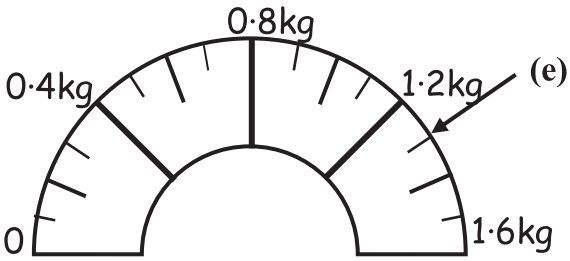
(c) What length of line have you taken away?

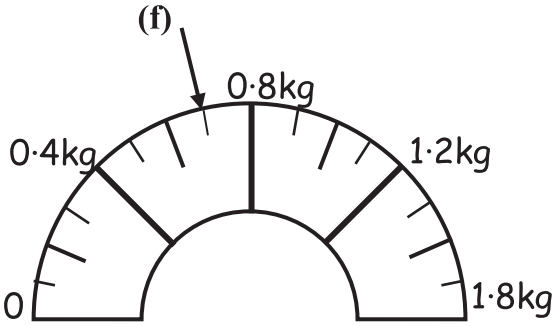
9. Write down the weight indicated on each of these scales?





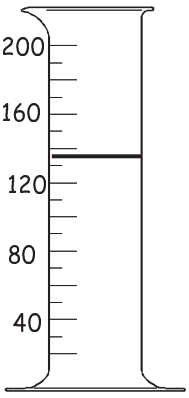




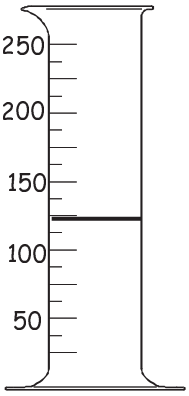


10. Write down the volumes indicated on these measuring jugs:

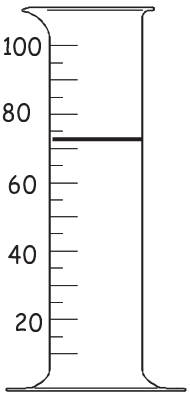
(a)



(b)

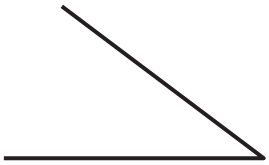


(c)



11. Estimate the size of these angles and then use a protractor to check:

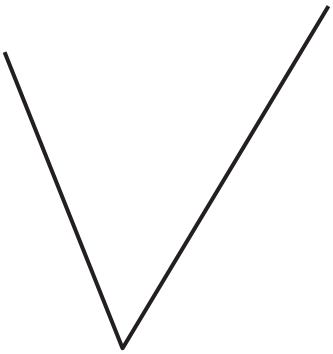
(a)



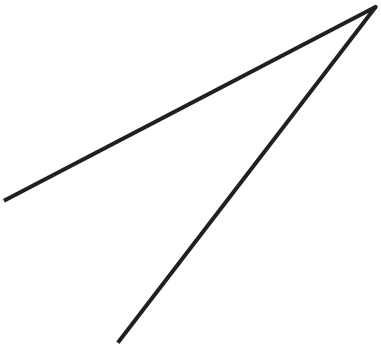
(b)

(c)

(d)

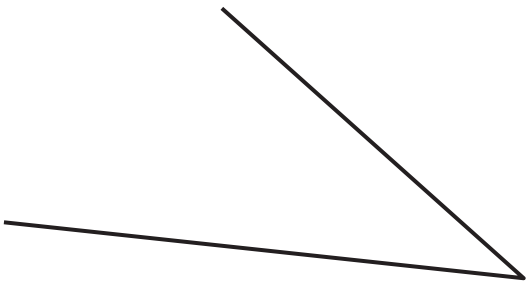


(e)

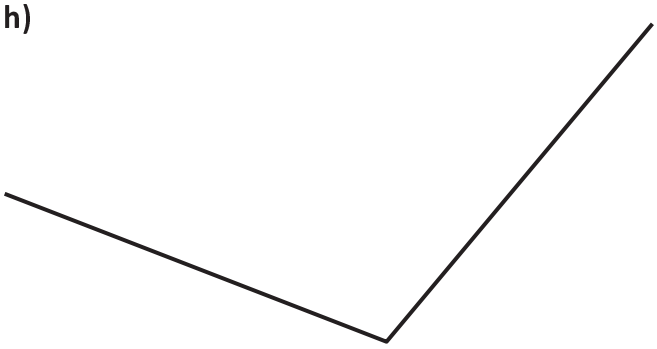


(f)

(g)

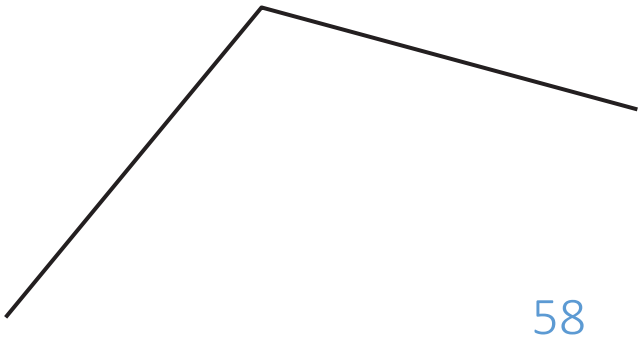


(h)



(i)

(j)



Conversions

1. Change to kilograms:

(a)	4000g	**(b)**	34000g	**(c)**	90000g	**(d)**	36000g
(e)	3500g	**(f)**	4800g	**(g)**	3700g	**(h)**	2600g
(i)	3670g	**(j)**	8635g	**(k)**	2082g	**(l)**	1070g
(m)	340g	**(n)**	780g	**(o)**	375g	**(p)**	863g
(q)	65g	**(r)**	23g	**(s)**	99g	**(t)**	21g
(u)	3g	**(v)**	7g	**(w)**	9g	**(x)**	1g

2. Change to grams:

(a)	8kg	**(b)**	19kg	**(c)**	50kg	**(d)**	75kg
(e)	4·642kg	**(f)**	1·635kg	**(g)**	7·482kg	**(h)**	1·077kg
(i)	0·349kg	**(j)**	0·653kg	**(k)**	0·42kg	**(l)**	0·68kg
(m)	3·54kg	**(n)**	5·65kg	**(o)**	10·02kg	**(p)**	16·67kg
(q)	4·8kg	**(r)**	7·2kg	**(s)**	45·4kg	**(t)**	21·6kg
(u)	0·53kg	**(v)**	0·087kg	**(w)**	0·09kg	**(x)**	0·001g

3. Change these to litres:

(a)	3000ml	**(b)**	3800ml	**(c)**	60000ml	**(d)**	83000ml
(e)	6700ml	**(f)**	2700ml	**(g)**	1700ml	**(h)**	9200ml
(i)	3890ml	**(j)**	3728ml	**(k)**	5087ml	**(l)**	2085ml
(m)	810ml	**(n)**	270ml	**(o)**	281ml	**(p)**	928ml
(q)	29ml	**(r)**	10ml	**(s)**	82ml	**(t)**	94ml
(u)	6ml	**(v)**	1ml	**(w)**	7ml	**(x)**	4ml

4. Change these to millilitres:

(a)	4l	**(b)**	22l	**(c)**	80l	**(d)**	65l
(e)	4·642l	**(f)**	1·635l	**(g)**	7·482l	**(h)**	1·077l
(i)	0·756l	**(j)**	0·831l	**(k)**	0·81l	**(l)**	0·62l
(m)	1·57l	**(n)**	2·91l	**(o)**	12·09l	**(p)**	24·27l

(q)	1·3/	**(r)**	6·9/	**(s)**	21·1/	**(t)**	98·1/
(u)	0·076/	**(v)**	0·722/	**(w)**	0·06/	**(x)**	0·005/

5. Change these to metres:

(a)	400cm	**(b)**	300cm	**(c)**	1200cm	**(d)**	11400cm
(e)	60cm	**(f)**	70cm	**(g)**	91cm	**(h)**	28cm
(i)	5230cm	**(j)**	2871cm	**(k)**	1009cm	**(l)**	3322cm
(m)	8cm	**(n)**	7cm	**(o)**	1cm	**(p)**	5cm

6. Change these to centimetres:

(a)	7m	**(b)**	36m	**(c)**	120m	**(d)**	134m
(e)	570m	**(f)**	23m	**(g)**	12·3m	**(h)**	9·06m
(i)	6·4m	**(j)**	0·6m	**(k)**	2·05m	**(l)**	7·8m
(m)	7·98m	**(n)**	4·007m	**(o)**	0·09m	**(p)**	0·7m

7. Change these to centimetres:

(a)	7000mm	**(b)**	3600mm	**(c)**	10200mm	**(d)**	11400mm
(e)	570mm	**(f)**	230mm	**(g)**	123mm	**(h)**	906mm
(i)	60mm	**(j)**	20mm	**(k)**	25mm	**(l)**	78mm
(m)	7mm	**(n)**	4mm	**(o)**	2mm	**(p)**	1mm

8. Change to millimetres:

(a)	8cm	**(b)**	3cm	**(c)**	6·7cm	**(d)**	6·98cm
(e)	0·34cm	**(f)**	1·78cm	**(g)**	2·59cm	**(h)**	3·09cm

9. Change to kilometres:

(a)	6000m	**(b)**	1500m	**(c)**	29000m	**(d)**	4870m
(e)	536m	**(f)**	650m	**(g)**	21m	**(h)**	7m

10. Change to metres:

(a)	3km	**(b)**	12km	**(c)**	3·8km	**(d)**	4·67km
(e)	0·216km	**(f)**	0·64km	**(g)**	0·37km	**(h)**	0·017km

11. Change these to metres:

(a)	7000mm	**(b)**	3600mm	**(c)**	10200mm	**(d)**	11400mm
(e)	570mm	**(f)**	230mm	**(g)**	123mm	**(h)**	906mm
(i)	60mm	**(j)**	20mm	**(k)**	25mm	**(l)**	78mm
(m)	7mm	**(n)**	4mm	**(o)**	2mm	**(p)**	1mm

12. Change to millimetres:

(a)	9m	**(b)**	2m	**(c)**	3·3m	**(d)**	5·34m
(e)	0·234m	**(f)**	0·78m	**(g)**	0·99m	**(h)**	0·009m

13. Change to kilometres:

(a)	700000cm	**(b)**	150000cm	**(c)**	230000cm	**(d)**	56700cm
(e)	53610cm	**(f)**	4700cm	**(g)**	660cm	**(h)**	90cm

14. Change to centimetres:

(a)	2km	**(b)**	23km	**(c)**	3·5km	**(d)**	1·53km
(e)	0·333km	**(f)**	0·674km	**(g)**	0·557km	**(h)**	0·046km

Interpret graphical data and situations involving probability to solve, straightforward real-life problems involving money/time/measurement

Reading Tables

1. This table shows the cost of hiring a bike in Millport:

	2 hours	**4 hours**	**6 hours**
Adult	£3	£5.50	£6.75
Child	£2	£3.50	£4.75

Answer the following questions from the table:

(a) How much does it cost for an adult to hire a bike for 4 hours?

(b) How much would it cost for 1 adult and 1 child to hire a bike for 2 hours?

(c) Mr and Mrs Cameron and their 2 young children want to hire bikes for 6 hours

How much would it cost altogether?

2. Here is a table showing the cost of a holiday in Spain. Prices are for 14 nights for an adult. Children (5 – 15) pay half price.

June	July	August	September	October
£549	£589	£628	£607	£555

Answer these questions from the table:

(a) How much would it cost one adult to go to Spain in August?

(b) David is 21 and decides to take his little sister (15) to Spain in October.

How much would it cost altogether?

(c) Mr and Mrs Davis take Peter (10) and Pat (17) to Spain in July.

How much would this holiday cost in total?

3.

OCTOBER

M	T	W	T	F	S	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

Answer these questions about this calendar:

(a) What date was the third Sunday of October?

(b) The school had a Disco on October 23rd.On which day of the week was it?

(c) The Douglas family went away on a skiing holiday on the 12th and came home on the23rd. How many nights were they away for?

(d) What date was it 1 week before the 14th?

4.

34	21	24	9	13
41	25	3	22	
7	27	33		
17	32			
30				

BEETON
CEETON
DEETON
GEETON
LEETON
FEETON

ALL DISTANCES ARE IN **KILOMETRES.**

Answer these questions from the distance table:

(a) How far is from Beeton to Ceeton?

(b) Katie travelled from Leeton to Deeton.

How far did she travel?

(c) John drove from Beeton to Feeton and then on to Geeton?

How far did he drive altogether?

5. The local stationers make photocopies. The table shows the charges they make for doing this:

NO OF COPIES	BLACK & WHITE	COLOUR
UP TO 10	10p each	20p each
11-50	9p each	18p each
51-100	8p each	16p each
101-150	7p each	14p each
151-200	6p each	12p each
201-250	5p each	10p each

(a) How much would it cost for:

(i) 5 copies (black and white) **(ii)** 60 copies (colour) **(iii)** 200 copies (colour) **(iv)** 105 copies (black and white)

(b) Janine wanted 50 copies of a worksheet in black and white but thought it might be cheaper to get 55 copies.

By calculating the cost of 50 and 55 decide whether Janine was correct or not.

(c) Holly went to get 20 coloured copies of a photograph. How much would she have saved if she had got black and white copies instead of coloured ones?

6. Mandy works in a shoe shop and is often asked about continental shoe sizes. She has this table to help her:

Continental	35·5	36	37	37·5	38	38·5	39	40	41	42	43
U.K.	3	3·5	4	4·5	5	4·5	6	6·5	7	8	9

Write out what continental sizes these U.K. sizes are the same as:

(a) 5 **(b)** 7 **(c)** 3·5

7. This table shows the number of rolls of wallpaper required for different sizes of rooms:

Height from ceiling to floor	**Width round room**							
	9m	**10m**	**12m**	**13m**	**14m**	**15m**	**17m**	**18m**
0·75 – 1·00m	2	3	3	3	3	4	4	4
1·00 – 1·25m	3	3	4	4	4	5	5	5
1·25 – 1·50m	3	4	4	5	5	5	6	6
1·50 – 1·75m	4	4	5	5	6	6	6	7
1·75 – 2·00m	4	5	5	6	6	7	7	8
2·00 – 2·15m	4	5	5	6	6	7	7	8
2·15 – 2·38m	4	5	5	6	6	7	7	8

(a) Use the table to decide how many rolls of wallpaper would be needed for these rooms:

(i) Height: 1·7m Width: 13m

(ii) Height: 2·1m Width: 18m

(iii) Height: 1·9m Width: 9m

(b) Mr and Mrs Baillie were going to wallpaper their lounge and their bedroom.

Their lounge was 2·2 metres high and had a width of 18m. Their bedroom was the same height but was only 14 metres wide.

Work out how many rolls of paper they would need altogether.

(c) The wallpaper they chose for the lounge cost £12.50 a roll and for the bedroom £7.75 a roll.

Calculate how much it would cost them to buy the wallpaper for both rooms.

8. A survey was carried out amongst 500 adults who booked a holiday on-line to find out what type of holiday they had chosen.

The results of the survey are shown in the table below.

Age	Package	Activity	Fly drive	Cruise
50 and under	112	96	38	24
Over 50	55	48	31	96

Answer these questions from the table:

(a) How many of the adults surveyed were over 50 years old?

(b) How many adults under 50 booked to go on a cruise?

(c) How many in total booked to go on a package holiday?

(d) What does this information tell you about their holiday choices as people get older?

9. The loan table below shows the monthly repayments for borrowing different amounts from a finance company with and without loan protection.

Answer the questions below from the information in the table.

Sink Before You Can Swim Loans						
	48 months		36 months		24 months	
	with	without	with	without	with	without
£20 000	492.27	476.66	633.62	601.94	889.81	845.32
£15 000	398.70	387.76	485.20	460.21	682.36	648.24
£10 000	279.14	265.18	346.81	329.47	494.91	470.16
£8 000	223.00	212.50	277.50	263.00	405.50	385.50

(a) Ally wants to borrow £15000 and to pay it back over 24 months with loan protection.

How much would he have to pay back each month?

(b) How much would he save per month if he took the loan without loan protection?

(c) Stuart borrowed £10000 and wanted to pay it back over 36 months without loan protection.

What is the amount he would have to pay per month?

(d) Gordon is paying back £263 per month without loan protection.

How much did he borrow, how long will it take him to pay the loan back and did he take it with or without loan protection?

(e) Katie can repay £390 per month and wants to have loan protection.

What is the maximum amount of money she can borrow and for how long?

(f) If Katie decided not to take loan protection, how much could she then borrow and for how long?

10. Maria decides to apply for a credit card and compares some of those available.

Credit Card	Annual Fee	APR	Monthly rate	Minimum Payment
Vista	£12	21·1%	1·61%	£5 or 5%
Silvercarp	none	19·8%	1·52%	£4 or 4%
Canadian Express	£15	28·8%	2·13%	£5 or 5%
National Direct	£10	18·6%	1·43%	£5 or 5%

(which ever is greater)

(a) How much is the annual fee for Canadian Express?

(b) What is the APR for National Direct?

(c) What is the monthly rate of interest for Vista?

(d) What is the minimum payment for Silvercarp?

(e) If Maria spent £150, how much would her minimum payment be with Vista?

(f) How much would it be with Silvercarp?

11. The table below shows the cost of a touring holiday to USA with a stay in either Scottsdale or Las Vegas. Prices are per person.

		Dates						
	Days	Apr 15	Apr 22	May 20 Jun 3	Jun 10	Sep 2, 9, 23	Sep 30	Oct 14
Tour + Scottsdale	16	1965	2035	1999	2059	2069	2115	2039
Tour + Las Vegas	17	2125	2189	2159	2219	2229	2269	2195
There is a supplement for single travellers of £495. Children 5 – 15 get 10% discount.								

(a) How many days does the Tour and Scottsdale holiday last?

(b) How much would it cost for these holidays?

(i) Tour + Las Vegas leaving on June 10th for 2 adults.

(ii) Tour + Scottsdale leaving on April 22nd for 4 adults.

(iii) Tour + Las Vegas for 2 adults and 2 children (5 and 10) leaving on October 14th

(iv) Tour + Scottsdale for 1 adult leaving on June 3rd.

12. This table shows the cost of a holiday to Dubrovnik. Prices are per person.

		Dates						
	Days	Feb 7	Mar 7	Apr 4	May 2	Jun 6	Jul 4	Aug 1
Hotel Imperial	3	386	386	618	699	843	743	775
	7	574	574	062	1123	1327	1279	1311
	10	715	715	1220	1441	1690	1681	1713
	14	903	903	1564	1865	2174	2217	2249
Hotel Excelsior	3	392	392	603	621	765	632	703
	7	588	588	927	941	1145	1059	1143
	10	735	735	1170	1181	1430	1389	1473
	14	931	931	1494	1546	1810	1829	1913
There is a supplement for single travellers of £75 per night. Children 5 – 15 get 20% discount.								

Calculate the cost of these holidays

(a) 14 nights in the Hotel Imperial for 2 adults leaving on June 6th.

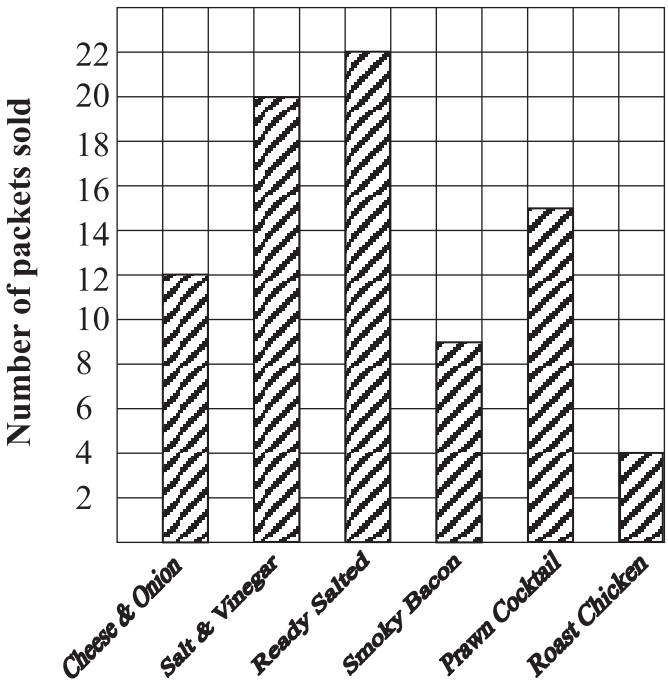
(b) 10 nights in Hotel Excelsior for 2 adults leaving on August 1st.

(c) 3 nights for 2 adults and 1 child in the Hotel Imperial leaving on April 4th.

(d) 7 nights in the Hotel Excelsior for 1 adult leaving on March 7th.

Interpreting statistical diagrams

1. A school tuck shop records how many packets of each flavour of crisps it sells each day. The results for Monday are shown in the bar graph below.



(a) How many flavours of crisps does the tuck shop sell?

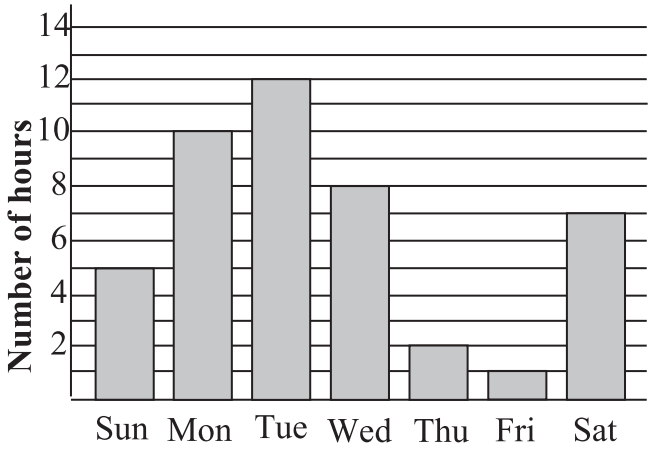
(b) What is the most popular flavour?

(c) What was the total number of packets sold?

(d) What is the least popular flavour?

(e) List the flavours in order from the most popular to the least popular.

2. The bar chart shows the number of hours of sunshine for a week in April.

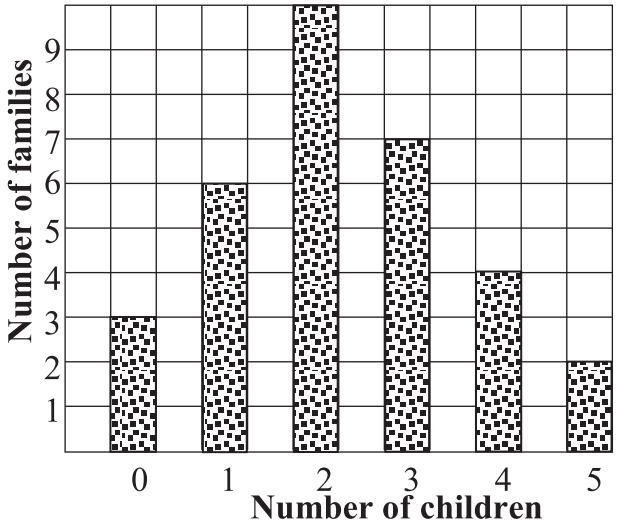


(a) Which day was the sunniest?

(b) Which day had 8 hours of sunshine?

(c) What was the total number of hours of sunshine over the weekend (Saturday & Sunday)?

3.



A number of families in an estate were asked about the number of children in the family.

The results are shown in the bar chart.

(a) How many families had 3 children?

(b) How many had no children?

(c) How many had more than 3 children?

(d) How many families were asked?

4. 1200 books in the school library are classified in four categories.

(a) What fraction of the books are
(i) fiction

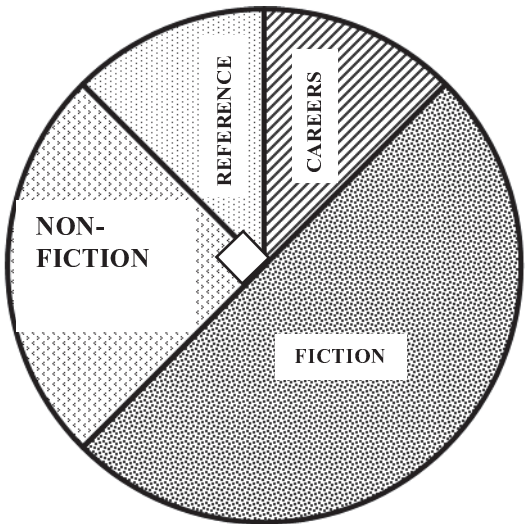
(ii) non-fiction

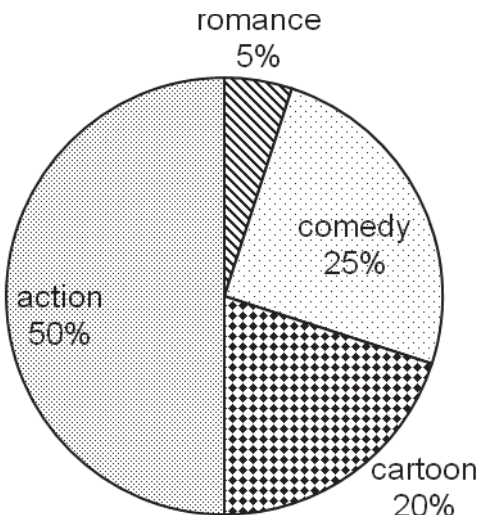
(iii) reference

(iv) careers?

(b) How may non-fiction books are there ?

(c) How many careers books are there?





5. The 40 films on TV over a holiday weekend can be put into 4 categories.

(a) What fraction of the films were

(i) comedy

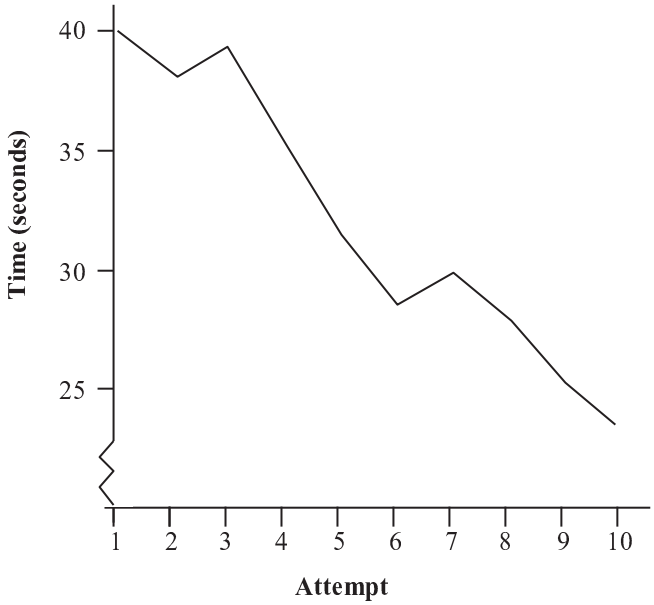
(ii) action

(iii) romance

(iv) cartoon ?

(b) Which category had the most films?

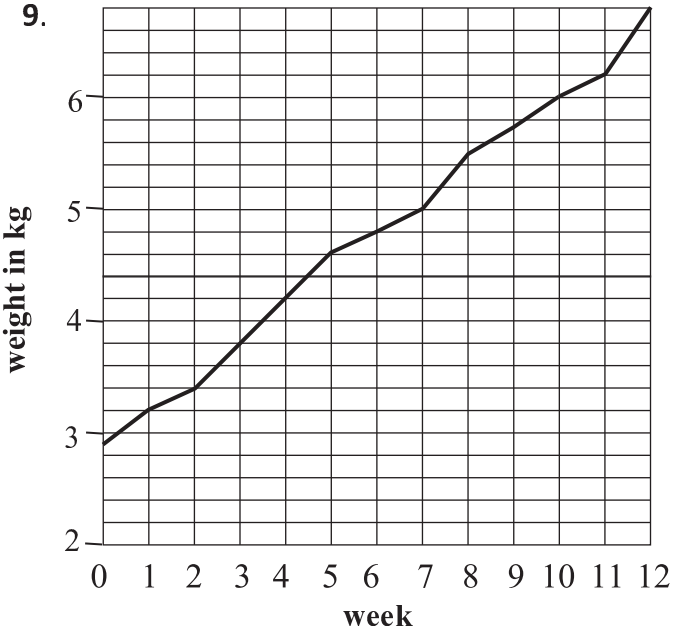
8. The graph shows the time taken for a pupil to successfully walk through a maze in 10 attempts.



(a) What happens as the number of attempts increases?

(b) Why do you think that is the case?

9.



The graph shows the increase in a baby's weight over its first few weeks.

(a) What was the baby's birth weight?

(b) What did it weigh after

(i) 5 weeks

(ii) 9 weeks

(iii) 12 weeks

(c) How much weight did the baby put on between week 3 and week 7?

10. A sample of tomato plants are measured for height. Their heights are recorded to the nearest centimetre.

The stem-and-leaf diagram shows the results.

(a) How many plants were in the sample?

(b) What height is the tallest plant?

(c) Write out level 5 in full.

(d) What fraction of the plants were more than 50cm tall?

Height of Plant (cm)

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

$n = 16$ 2 | 1 represents 21cm

11. Susan decided to visit various shops in her surrounding area in order to compare the price of an identical CD player.

Her results, shown below, are given to the nearest pound.

£68 £75 £73 £80 £75 £79 £81 £66 £71 £92 £83 £75 £78

(a) Construct a stem-and-leaf diagram to represent this data.

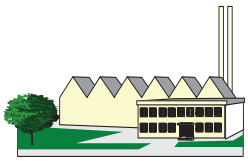
(b) What was the median price?

12. A factory has a small workforce of eleven people. The owner decides to compare absence rates (in days) over the last two years.

The results are shown in the back-to-back stem-and-leaf diagram below.

Absences (days)

last year		*this year*
7 6	0	3 9 9
5	1	1 1 7
8 5 1	2	4 6
7 2 0	3	3
4 2	4	1 5



$n = 11$ 0 | 3 represents 3 days $n = 11$

(a) What is the largest number of absences recorded?

(b) State the median of the absences for "*last year*" and "*this year*".

(c) Compare the absences and comment

Interpret Statistics

1. Two makes of matches are being compared, "Brighto" and "Sparky", they both cost the same per box.

14 boxes of each type are sampled to find the number of matches in a box. Here are the results.

Brighto	48	45	47	39	52	36	58	Sparky	38	42	49	39	62	56	52
	41	38	39	46	50	61	37		40	58	49	29	51	64	57

(a) Construct a back-to-back stem-and-leaf diagram to represent this information.

(b) Which make of match, if any, is a better buy? Give a reason for your answer.

2. Paul works in a shoe shop on a Saturday. The manager wants to make a special purchase of "Trainers". He asked Paul to do a tally of sizes of men's shoes sold that day.

Size	6	6½	7	7½	8	9	10
Pairs Sold	5	17	21	16	15	11	2

(a) Which size of shoe will the manager order most of?

(b) What do we call this measure in statistics?

3. The ***Lucky Strike Match Company*** advertises the *average* contents of its boxes as 48. Here is a sample of the boxes contents :

45 47 46 50 48 51 46 47 49 51

Is the company correct in their advert? Give a reason for your answer.

4. The ages of the players in a local football team are given below :

19 23 25 24 19 25

31 27 29 30 34

(a) Calculate the mean, median and mode.

(b) Jake is 25 years old. Is he above or below the average age?

(c) The two oldest players leave and are replaced by two players aged 18 and 25.

Calculate the mean median and modal age of the team now.

(d) How would you describe Jake's age now?

5. A small firm employs 10 people. The salaries of the employees are as follows :

£40 000, £18000, £15000, £9000, £15000, £15000, £13000, £15000, £15000, £15000.

(a) Calculate the mean, median and mode.

(b) Which of the three measures best describes the ***average*** salary in the company?

6. Diane does a lot of travelling in her job. She keeps a note of the miles she drove each week for the first 10 weeks.

785 846 816 704 685 723 960 788 729 814

(a) Calculate the mean weekly mileage.

(b) If Diane's mean weekly mileage stays the same, how many miles would she expect to travel in a year? (She has 6 weeks holiday when she does no driving)

7. In a 5-a-side football competition, the average age of a team must not exceed 16.

Below are the ages of 2 groups of 10 players who want to enter 2 teams each.

A : 14 , 16 , 14 ,17 , 15 , 18 , 16 , 15 , 17 , 18

B : 14 , 15 , 16 , 17 , 15 , 16 , 14 , 16 , 18 , 14

(a) How would you arrange the teams?

(b) Here are the ages of another team: 15, 17, 16, 17, 16

Will they be allowed to take part in the competition?

8. In nine arithmetic tests during the term, Peter's scores were:

20 22 18 21 22 16 14 19 17

Which of the three averages - mean, median or mode - would he prefer to count as his '*mark*' ?

9. The first eight customers at a supermarket one Saturday spent the following amounts:

£25.10, £3.80, £20.50, £15.70,

£38.40, £9.60, £46.20, £10.46.

(a) Find the mean amount spent.

(b) I spend £11.53. Compare this to the average amount spent.

Probability

In each of these situations, decide which is the more likely to happen. Give a reason for you choice each time.

1. **(a)** **A:** choosing a red card from a pack of cards
B: throwing a multiple of 3 on a die

(b) **A:** choosing a double from a set of dominoes
B: choosing a face card from a pack of cards

(c) **A:** throwing an even number on a die
B: getting a head when a coin is tossed

(d) **A:** choosing an ace from a pack of cards
B: getting a number more than 10 when throwing 2 dice

(e) **A:** getting a total of more than 7 when two dice are thrown
B: getting 'tails' when a coin is tossed

(f) **A:** choosing a face card from a pack of cards
B: choosing a club from a pack of cards

2. **(a)** A coin is tossed 80 times. How many times would you expect:

(i) heads **(ii)** tails?

(b) A die is thrown 24 times. How many times would you expect:

(i) an even number **(ii)** a 3?

(c) A card is chosen from a pack of playing cards 156 times. The card is replaced each time. How many times would you expect:

(i) a club **(ii)** a face card **(iii)** the ace of clubs?

(d) A domino is chosen from a pack 112 times and replaced each time. How many times would you expect:

(i) a double **(ii)** a domino with 4 spots **(iii)** a double 4?

3. The probability of a bus arriving on time at a certain bus stop is $\frac{1}{4}$.

(a) What is the probability of it not arriving on time?

(b) Out of 64 buses arriving at that bus stop, how many are likely to be on time?

4. The probability of a cat having a litter of more than eight kittens is $0 \cdot 24$.

(a) What is the probability of a cat having a litter of eight or less kittens?

(b) Out of 75 female cats, how many would you expect to have a litter of more than eight kittens?