



MATHEMATICS



Unit 3

Managing Money

Income and Expenses

Employee No.	Employee Name	Pay Date	National Insurance Number
1	Mr John Farley	23/09/2005	920012345D
Payable	Rate	Amount	Deductions
Salary	1.00	1000.00	1000.00
			PAYE Tax 100.35
			National Insurance 85.34
Mr John Farley 33 Sampford Road Bristolaville Green Walsall		This Period Total Gross Pay 1000.00 Gross for Tax 1000.00 Earnings for NI 1000.00 Payment Period Monthly	
WS88 90Q		Year to Date Total Gross Pay TD 3000.00 Gross for Tax TD 3000.00 Tax Paid TD 327.80 Earnings for NI TD 3000.00 National Insurance TD 195.02	
Cheapest Payslips P60 Tax Code 489L Dept 0 Tax Period 3 Payment Method BACS			Net Pay 825.31

Exercise 1

1 Calculate the Gross Pay (pay before deductions) in each case.

a	Basic Pay	£500.00
	+ Overtime	£10.00
	+ Bonus	£0.00
	GROSS PAY	<u> </u>

b	Basic Pay	£250.00
	+ Overtime	£30.00
	+ Bonus	£10.00
	GROSS PAY	<u> </u>

	Basic Pay	Overtime	Bonus
c	£ 230.00	£ 120.00	£ 0.00
d	£ 440.00	£ 50.00	£ 20.00
e	£ 295.00	£ 158.00	£ 60.00
f	£ 564.00	£ 195.00	£ 17.00
g	£ 341.40	£ 88.80	£ 123.50
h	£ 954.48	£ 215.69	£ 15.67

2 Calculate the Total Deductions in each case.

a

Income Tax	£180.00
+ NI	£10.00
+ Pension	£0.00
DEDUCTIONS	<u> </u>

b

Income Tax	£200.00
+ NI	£60.00
+ Pension	£10.00
DEDUCTIONS	<u> </u>

	Income Tax	NI	Pension
c	£ 64.40	£ 8.60	£ 0.00
d	£ 241.50	£ 58.50	£ 12.00
e	£ 154.40	£ 158.60	£ 51.80
f	£ 584.45	£ 158.91	£ 84.23
g	£ 764.84	£ 248.72	£ 125.13

3 Shown below is a copy of Mr Morton's weekly wage slip.
Can you work out the missing amounts?

Name A Morton	Employee No. 702	NI No. TF145862C	Week No. 19
Basic Pay £359.20	Overtime £62.50	Bonus £15.60	Gross Pay £ (a)
Income Tax £40.60	NI £25.60	Pension £32.40	Total Deductions £ (b)
			Net Pay £ (c)

- a** His Gross Pay
- b** His Total Deductions
- c** His Net Pay

- 4 Shown below is a copy of Mr Wilson's weekly wage slip.
Can you work out the missing amounts?

Name B Wilson	Employee No. 1541	NI No. CG255441D	Week No. 50
Basic Pay £452.10	Overtime £23.50	Bonus £42.20	Gross Pay £ (a)
Income Tax £59.25	NI £36.73	Pension £20.42	Total Deductions £ (b)
			Net Pay £ (c)

- a His Gross Pay
b His Total Deductions
c His Net Pay

- 5 Shown below is a copy of Mrs Nimmo's monthly wage slip.
Can you work out the missing amounts?

Name C Nimmo	Employee No. 423F	NI No. GF462587A	Month. 2
Basic Pay £1564.34	Overtime £84.00	Bonus £0.00	Gross Pay £ (a)
Income Tax £176.92	NI £111.28	Pension £142.21	Total Deductions £ (b)
			Net Pay £ (c)

- a Her Gross Pay
b Her Total Deductions
c Her Net Pay

- 6 Shown below is a copy of Miss Baxter's monthly wage slip.
Can you work out the missing amounts?

Name D Baxter	Employee No. 132/5643	NI No. DJ235874F	Month. 5
Basic Pay £2199.80	Overtime £0.00	Bonus £0.00	Gross Pay £ (a)
Income Tax £304.88	NI £188.06	Pension £205.52	Total Deductions £ (b)
			Net Pay £ (c)

- a Her Gross Pay
- b Her Total Deductions
- c Her Net Pay

- 7 Shown below is a copy of Mr McGregor's weekly wage slip.
Can you work out the missing amounts?

Name A McGregor	Employee No. 125-5847-3	NI No. JM846878D	Week. 3
Basic Pay £304.60	Overtime £15.00	Bonus £0.00	Gross Pay £ (a)
Income Tax £79.96	NI £4.70	Pension £5.80	Total Deductions £ (b)
			Net Pay £ (c)

- a His Gross Pay
- b His Total Deductions
- c His Net Pay

Exercise 2

- 1 Here are three supermarket till receipts. Find the TOTAL of each one.

Safeco

Bread	0.74
Milk	0.56
Yoghurt	1.52
Digestives	0.75
Potatoes	0.64
Bleach	0.39
Paper Hankies	1.55
TOTAL	

Asdabury

Crisps multi	2.25
Corn Flakes	1.48
Jam	0.82
Tomato Soup	0.43
Chicken Soup	0.43
Bacon	1.58
Smoked Ham	1.79
Soap powder	5.65
Newspaper	0.42
Fun size choc	2.15
TOTAL	

Sainsco

Variety pack	1.32
Apples 8 pack	1.44
Bananas (1.2kg)	1.56
Ribena multi	3.48
Toilet Rolls (12)	4.96
Coffee (400g)	4.73
Fruit Juice	1.80
TOTAL	

- 2 Alex buys a moped costing £329 plus £57.60 VAT.
How much does Alex pay for the moped?



- 3 Shona has £50.
She buys a pair of trousers costing £34.99.
How much money does Shona have left?

- 4 Here is Miriam's gas bill

NORTHERN GAS COMPANY LIMITED		£
Standing Charge		15.60
Cost of units used		39.58
TOTAL		

Find the total cost of Miriam's gas bill.

- 5 Mark and Angela have had their lounge decorated.
Here is a copy of the bill they received from the decorators.

Decorating Spotless Co.	£
Wallpaper	32.40
Paint	12.45
Labour	64.00
VAT	21.77
TOTAL	



Calculate the total amount Mark and Angela had to pay.

- 6 A CD player usually costs £54.60.
A discount of £3.25 is being offered.

How much will the CD player now cost?

- 7 Mary orders a gardening book from the book club.
The book costs £12.49 and plus £2.35 for postage.

How much will Mary pay altogether?

- 8 Myra's mobile phone bill has just arrived.

MOBILE PHONE COMPANY	
June	£
Cost	44.58
VAT	7.80
TOTAL	

Work out the total cost of the phone bill.

- 9 Here is Mrs Gracie's electricity bill.

BRIGHT ELECTRIC COMPANY	£
Standing Charge (1 Feb - 30 Apr)	11.45
Cost of units used	28.15
TOTAL	

Find the total cost of the electricity bill.

Exercise 3

Simplify the following

- 1 Mr Jarvie pays his council tax in 10 equal payments.
His total bill is £653.

How much is each payment?

- 2 Mary is taking her 2 children to the cinema.

- a Find the total cost of the tickets for Mary and her two children.
- b How much change will Mary get from £20?

XYZ Cinemas	Prices
Adults	£4.30
Children	£2.40

- 3 Paula weighs 72.6 kg when she joins a slimming club.
Her target weight is 64 kg.
After 2 weeks Paula has lost 3.5 kg.

- a What is Paula's weight now?
- b How much does she still have to lose to reach her target weight?

4 Emma Devine is a typist.

She earns £14 400 each year.

She earns the same amount each month.

a How much does she earn each month?

Emma gets a pay rise and now earns £15 000 a year.

b How much does she now earn each month?

5 Kevin is buying tiles for his kitchen.

He needs 252 tiles altogether. The tiles are sold in boxes of 12 .

a How many boxes of tiles will Kevin need to buy?

Each box of tiles costs £8.25.

b How much will the tiles cost?

6 Sally is saving £6.50 each week to buy a jacket costing £58.50.

a How many weeks will Sally need to save to buy the jacket?

Jane can save £9.75 each week.

b How many weeks will Jane need to save to buy the jacket?

7 There are 12 boys and 16 girls in class 1B.

They have to address 980 envelopes for a charity appeal.

All pupils will address the same number of envelopes.

How many will each pupil address?

8 Deborah has £30.

She buys 2 CDs which cost £12.95 each.

How much money does she have left?

9 A dry cleaners offers the following range of prices:

SUIT	£4.80
JACKET	£3.60
TROUSERS	£3.30
COAT	£5.75
DRESS	£3.55
SKIRT	£3.45



a What would it cost to have a suit, one pair of trousers and a skirt cleaned?

b As a special offer the dry cleaners will clean

‘3 for the price of 2’

with the **cheapest** of the three being cleaned free.

How much would you save if you used this offer to have the suit, trousers and skirt cleaned?

Non Calculator Percentages

Exercise 1

1 Work out:

- | | | |
|-------------------------------|---------------------------------|-----------------------------|
| a) 50% of £84 | b) 25% of £1000 | c) 20% of £80 |
| d) 10% Of £40 | e) 20% of £6400 | f) $33\frac{1}{3}\%$ of £81 |
| g) 50% of £9 | h) 10% of £52 | i) 10% of £63 |
| j) 75% of £48 | k) 75% of £92 | l) $66\frac{2}{3}\%$ of £45 |
| m) $33\frac{1}{3}\%$ of £7.20 | n) $66\frac{2}{3}\%$ of £153.60 | o) 75% of £61 |
| p) 10% of £15.50 | q) 20% of £13.20 | r) 10% of 20p |

- 2 A turtle laid 132 eggs. 50% of them were eaten by birds.
How many were eaten by birds?
- 3 20% of the pupils in a school are left handed.
If there are 1100 pupils, how many of them are left handed?
- 4 25% of the items sold at a car boot sale were CDs.
How many CDs were sold if there were 5400 items?
- 5 In Glasgow in 2009, it was sunny for 20% of the time.
If there are 365 days in a year, how many days was it sunny for?

Exercise 2

1 Work out:

- | | | |
|-----------------------------------|---------------------------------|-----------------------------|
| a) 50% of £3·20 | b) 25% of £852 | c) 20% of £8 |
| d) 10% of £60 | e) 10% of 43g | f) $33\frac{1}{3}\%$ of £39 |
| g) 25% of £1260 | h) 10% of 52cm | i) 20% of £7·50 |
| j) 75% of £4·80 | k) 60% of £12 000 | l) 80% of £550 |
| m) $33\frac{1}{3}\%$ of £7·20 | n) $66\frac{2}{3}\%$ of £153·60 | o) 75% of £61 |
| p) 10% of £15·50 | q) 20% of £13·20 | r) 10% of 20p |
| s) 50% of £ $\frac{1}{2}$ million | t) 40% of £390 | u) 70% of 60p |
| v) 30% of 1750kg | w) 90% of 50p | x) 60% of £75 |
| y) 80% of £21 | z) 70% of £8 | |

- 2 From 1(d) you will see that 10% of £60 = £6.
Use this result to write down:

(i) 30% (ii) 5% (iv) 15%

- 3 For £80 calculate:

(i) 10% (ii) 30% (iii) 5% (iv) 15%

- 4 For £40 calculate:

(i) 10% (ii) 30% (iii) 5% (iv) 15%

- 5 Write down 2 different ways of calculating 15% without a calculator.

- 6** $33\frac{1}{3}\%$ of the passengers in a train containing 267 passengers continue on the train until its destination.
How many passengers:
a continue to the final stop **b** get out before the final stop?
- 7** 75% of the people in a room are over the age of 30. If there are 754 people in a room, how many of them are:
a over the age of 30 **b** under the age of 30?
- 8** On a cruise ship, 40% of the passengers are ladies, 35% are men, 15% are girls and the rest are boys. There are 2400 passengers. How many are
a ladies **b** men **c** girls **d** boys?
- 9** A car costs £12 500 when new. At the end of the first year its value is $66\frac{2}{3}\%$ of the new price. At the end of the second year its value is 75% of the value after 1 year. At the end of the third year, its value is 80% of the value after 2 years. What is the value of the car at the end of
a 1 year **b** 2 years **c** 3 years?

Calculator Percentages

Exercise 1

Reminder!

35% of £640

$$= \frac{35}{100} \times 640$$

$$= 35 \div 100 \times 640$$

$$= £224$$

Calculate:

a) 12% of £600

b) 23% of £280

c) 36% of £25

d) 28% of £522

e) 24% of £16.50

f) 19% of £343

g) 57% of £62

h) 42% of £812

i) 83% of £4100

j) 18% of £94

k) 74% of £26

l) 14% of £598

m) 82% of £84

n) 18% of 22.50

o) 12% of £85.50

p) 76% of £55.50

q) 92% of £630

r) 42% of £720

s) 55% of £682

t) 16% of £15

u) 6% of £35

v) 8% of £45

w) 3% of £150

x) 2% of £60

Exercise 2

Calculate:

a) 7% of £16

b) 9% of £65

c) 41% of £25

d) 89% of £530

d) 17% of £380

e) 22% of £60

f) 46% of £5

g) 22% of £680

h) 7% of £50

i) 19% of £60

j) 35% of £14

k) 11% of £90

l) 44% of £12.50

m) 5% of £17

n) 6% of £90

o) 84% of £68.50

p) 8.5% of £64

q) 7.2% of £620

r) 3.1% of £540

s) 10.7% of £880

t) $4\frac{1}{2}\%$ of £18

u) $12\frac{1}{2}\%$ of £84

v) $3\frac{1}{2}\%$ of £650

w) $2\frac{1}{2}\%$ of £12

x) 6% of £52.30

y) 19% of £12.40

z) 84% of £658.70

Percentage Increase & Decrease

Exercise 1 – Non Calculator Questions

- 1 A lawnmower costing £130 is **reduced** by 50% in a sale.
Calculate the sale price of the lawnmower.
- 2 A Gamestation costing £120 is in the sale marked “**25% discount.**”
Calculate the sale price of the game station.
- 3 A pair of shoes are **reduced** by 10%.
If the shoes cost £50 full price, how much are they after the discount?
- 4 Simon has a new bike which should have cost him £350 from the factory. He received a 20% **discount** for taking the shop display bike.
How much did Simon pay for the bike?
- 5 A tourist helicopter ride to the Grand Canyon costs £162. Children under 5 years of age receive a 75% **discount**. How much does it cost for a child under 5 years of age to visit the Grand Canyon?
- 6 A shampoo bottle usually holds 240ml. In a special offer 25% is **added** to the contents. Calculate the amount of shampoo in the special offer bottle.
- 7 A cake shop decides to **increase** the weight of each cake by 20%. Each cake used to weigh 1600g. How much does each cake weigh now?
- 8 A painting costing £320 has its price **raised** by 50%. How much does the painting cost now?
- 9 A man buys a car at an auction for £2460. He fixes it up and sells it with a price **increase** of 20%. How much does he sell it for?
- 10 A recipe uses 72g of sugar. Mrs Helder decides to **increase** this amount by 25%. How much sugar does Mrs Helder need?

Exercise 2

- 1 Milk costs 80p per litre, but the price is expected to rise shortly by 5%.
What will the new cost of a litre of milk be?
- 2 Johnny takes the local bus to school. His return fare is £1.50 per day.
The bus company decides to increase all their fares by 20%.
What will Johnny's new return fare be?
- 3 In a sale a pair of shoes, normally priced at £47.52, are reduced by 25%.
What is the sale price of the shoes?
- 4 The average attendance at a football stadium last season was 48000.
This season it has dropped by 15%.
What is the average attendance at the stadium this season?
- 5 Farmer Yates had 60 cattle, but due to an outbreak of sickness he lost 85% of his herd. How many cattle does he still have left?

Exercise 3 – Calculator Questions

- 1 Calculate the sale price of the following items with the **reductions** stated:

	ITEM	NORMAL PRICE	DISCOUNT
(a)	T.V	£350	15%
(b)	D.V.D Player	£260	65%
(c)	Hi-Fi System	£850	30%
(d)	Shirt	£35	45%
(e)	Ornament	£15.80	25%
(f)	Table	£840	15%
(g)	Carpet	£688	14%
(h)	Fitted Kitchen	£5,800	24%
(i)	Magazine	£1.40	20%
(j)	Bag of sweets	£1.15	60%
(k)	Shoes	£52	5%

2 Calculate the new price of the following items after the following increases:

	ITEM	COST	INCREASE
(a)	Laptop	£400	12%
(b)	Camera	£560	35%
(c)	Calculator	£12	14%
(d)	Playstation	£200	32%
	ITEM	COST	INCREASE
(e)	Ornament	£34	26%
(f)	Book	£15.50	16%
(g)	CD	£12	11%
(h)	Jacket	£55	23%

Exercise 4

1 Calculate the sale price of the following items with the reductions stated:

	ITEM	NORMAL PRICE	DISCOUNT
(a)	T.V.	£350	15%
(b)	V.C.R.	£440	22%
(c)	Hi-Fi System	£849	18%
(d)	Skirt	£84.20	37%
(e)	Shirt	£35.60	28%
(f)	Ornament	£64.85	45%
(g)	Table	£220	7½ %
(h)	Carpet	£640	18½ %
(i)	Fitted Kitchen	£5,800	26%
(j)	Magazine	85p	11%
(k)	Bag of sweets	£1.19	24%
(l)	Shoes	£44.44	4¼ %

- 2 Calculate the new price of the following items after the following increases:

	ITEM	COST	INCREASE
(a)	Laptop	£487	13%
(b)	Camera	£250.50	35%
(c)	Calculator	£8.49	12%
(d)	Playstation	£199.50	21%
(e)	Ornament	£34.20	24%
(f)	Book	£15.50	17%
(g)	CD	£9.99	11%

Exercise 5 – Further Problems

- 1 A salesman has a salary of £16500. He receives a bonus of 4% of his salary. How much does he get altogether?
- 2 £820 is divided between 2 ladies. One gets 65%.
How much does **each** receive?
- 3 In a class of 40 pupils, 55% are girls. How many boys are there?
- 4 In 1981, the population of a town was 8030. By 1991, the population was just 90% of this figure. What was the population in 1991?
- 5 A car cost £12460 when new. A year later, its value was only 75% of this. What was its value a year later?
- 6 The composition of brass by weight is **64% copper, 32% zinc and the remainder is lead**. Find the weight of
(a) copper (b) zinc (c) lead in 650 kg of brass.
- 7 During a sale, all items are sold with 15% off their usual cost. What is the sale price of a CD which usually costs £12.20?
- 8 There are 40 people in a doctor's waiting room. 65% are **male**.
How many are **female**?
- 9 The rental on a flat is £360 per month. Ted and Lucy get a special deal and only have to pay 85% of this. How much did they pay per month?

Information Handling

Exercise 1 – Tables

1 Fill in the number section in the woodland table.

Creature	Tally	Number
Wood ant		
Woodlice		
Small fly		
Caterpillar		
Slug		
Snail		

Fill in the tally section in the heathland table

Creature	Tally	Number
Wood ant		2
Woodlice		4
Small fly		7
Caterpillar		8
Slug		5
Snail		4

- a Which minibeasts are the most common in woodland?
- b Which minibeasts are least common in heathland?

2 Shoppers in the supermarket were asked in a survey which was their favourite fruit. Here is a list of their responses.

BananaAppleBananaBananaGrape
OrangeAppleAppleStrawberryOrange
AppleBananaOrangeOrangeStrawberry
BananaBananaGrapeAppleApple
AppleOrangeStrawberryStrawberryApple

Copy this Tally Chart into your jotter and use the list above to complete it.

FRUIT	TALLY	TOTAL
Apple		
Banana		
Grape		
Orange		
Strawberry		

Then use the information in the tally chart to answer the questions below in your jotters.

- Which fruit was the most popular?
- a

Which fruit was the least popular?
- b

Which two fruits were preferred by the same number of people?
- c

How many more people preferred Apples to Grapes?
- d

How many fewer people preferred Strawberries to Bananas?
- e

How many people were surveyed all together?
- f

Order the fruits from most popular to least popular?

3 A children’s shoe shop took a survey of their customers shoe size over one day. Here is a list of their responses.

4	2	2	2	1	3	1	2	2
3	4	1	2	3	2	2	1	1
3	1	3	5	1	2	3	4	2

Copy this Tally Chart into your jotter and use the list above to complete it.

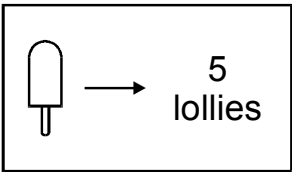
Shoe Size	TALLY	TOTAL
Size 1		
Size 2		
Size 3		
Size 4		
Size 5		







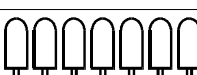
Then use the information in the tally chart to answer the questions below in your jotters.

- a** Which shoe size was most popular?
- b** Which shoe size was the least popular?
- c** What was the largest shoe size?
- d** What was the smallest shoe size?
- e** How many more children had size 2 shoes than had size 4 shoes?
- f** How many fewer children had size 5 shoes than size 1 shoes?
- g** How many customers did the shop have on the day of the survey?
- h** Order the shoe sizes from most popular to least popular?

Exercise 2 – Pictographs

1



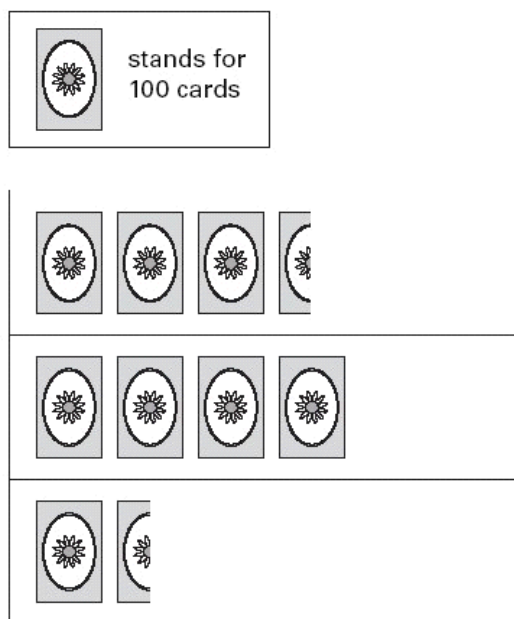
Number of lollies sold	
Monday	
Tuesday	
Wednesday	
Thursday	
Friday	
Saturday	
Sunday	

- a How many lollies were sold on Monday?
- b How many more lollies were sold on Tuesday than on Wednesday?

2 A shop sells different kinds of greeting cards.



This pictogram shows how many they sold in a week.

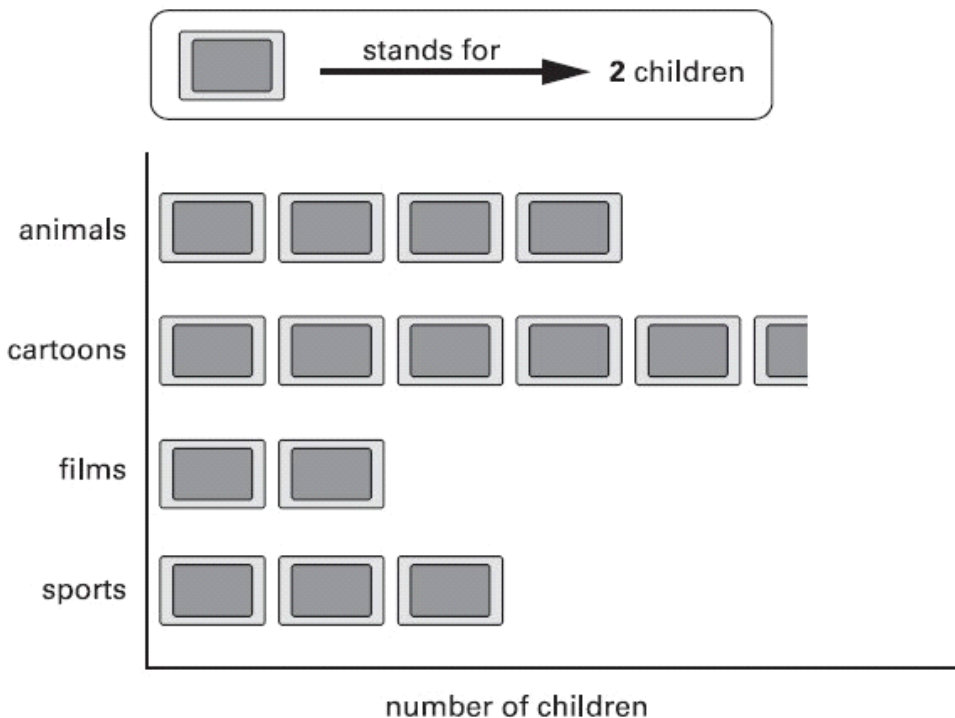


- a** Estimate how many Birthday cards were sold.
- b** Estimate how many more Thank You cards than Get Well cards were sold.

3 Kiz asked each child in his class,

‘What kind of television programme do you prefer to watch?’

Here are his results.



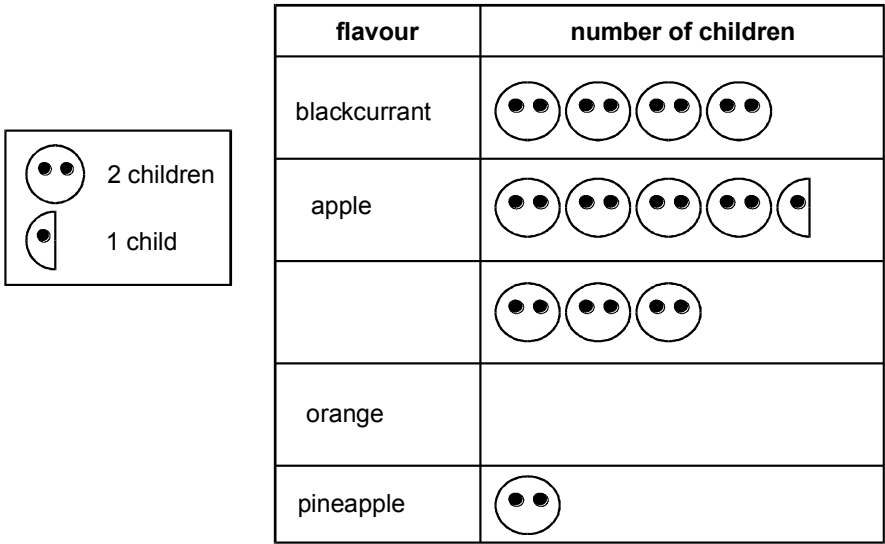
a How many **more** children prefer to watch cartoons than films?

b How many children were in the class?

4 Class survey of favourite fruit drinks

Flavour	Number of Children
Pineapple	2
Orange	10
Blackcurrant	8
Grapefruit	6
Apple	9

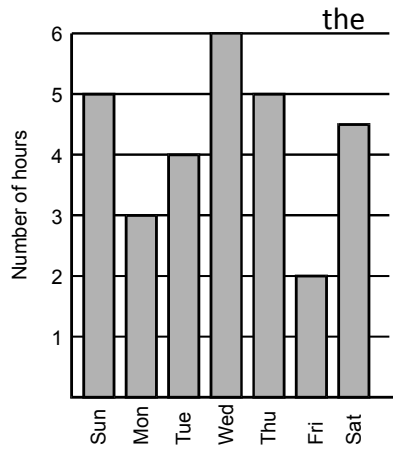
a Complete the pictogram for the class.



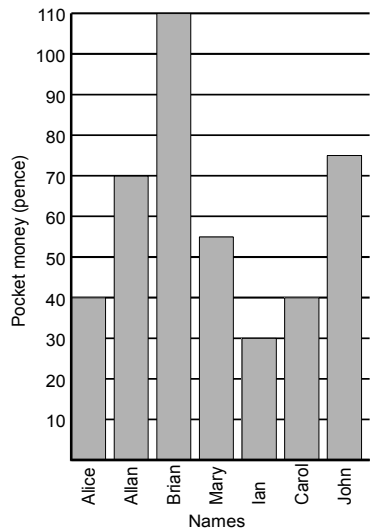
b How many children altogether chose the three most popular flavours?

Exercise 3 – Bar Graphs

- 1 This graph shows the number of hours sun shone on different days in a week.
- a On which day did the sun shine longest?
 - b On which day did the sun shine for 3 hours?
 - c For how long did the sun shine on Sunday?

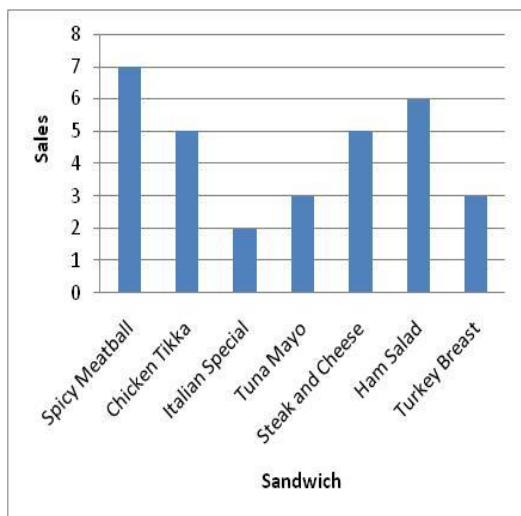


- 2 This graph shows the amount of pocket money given to various pupils.
- a How much money was Ian given?
 - b How much money was Mary given?
 - c Which BOY received least money?
 - d How many pupils are shown on the graph?



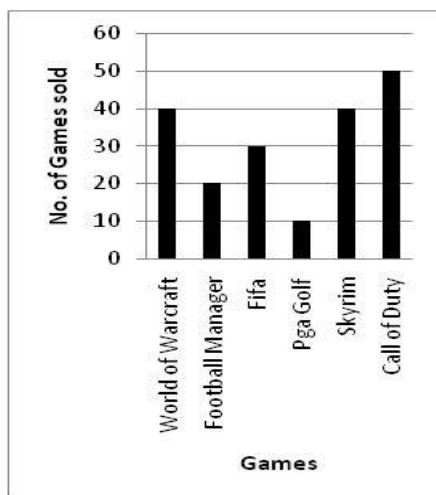
3 This graph shows which sandwiches were sold in Subway during Friday lunchtime.

- a** Which flavour sold 2 sandwiches?
- b** How many steak and cheese sandwiches were sold?
- c** Which sandwich was the most popular?
- d** How many sandwiches in total were sold?



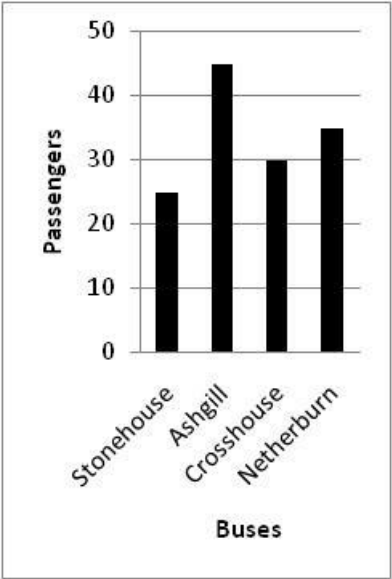
4 This graph shows the different X Box 360 games bought one week in HMV.

- a** How many Fifa games were bought?
- b** Which 2 games sold exactly 40 copies?
- c** Which game sold the least?
- d** What was the total sale of all these games?

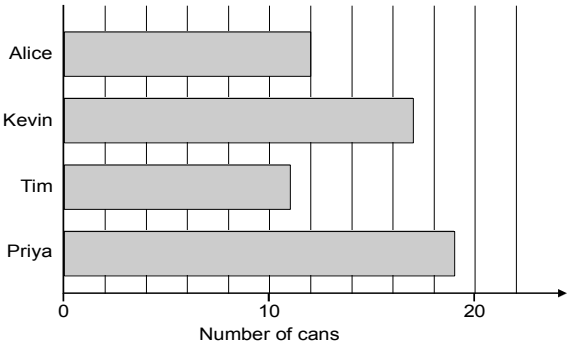


5 In a survey the number of pupils coming to Larkhall Academy by school bus was recorded. The information is shown on the graph below.

- a How many pupils were on the bus from Ashgill?
- b Which bus had the most pupils?
- c How many pupils in total used the buses that day?
- d The buses from Crosshouse and Netherburn were held up in traffic. How many pupils arrived late because of this?

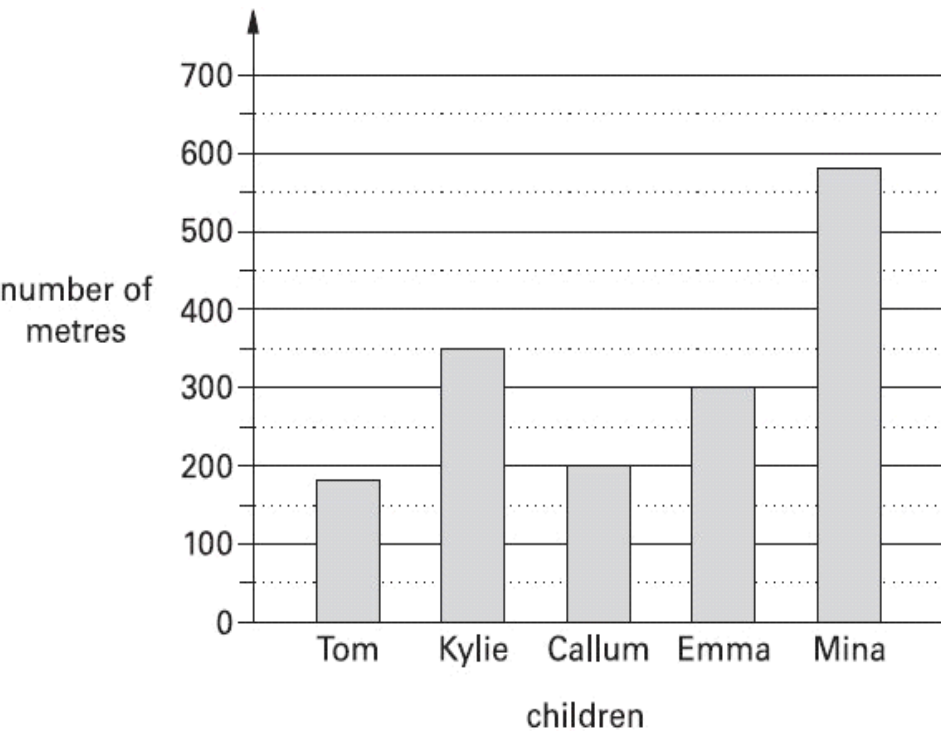


6 Some children collect cans for recycling. Here is a chart of how many cans they collect in the first week.



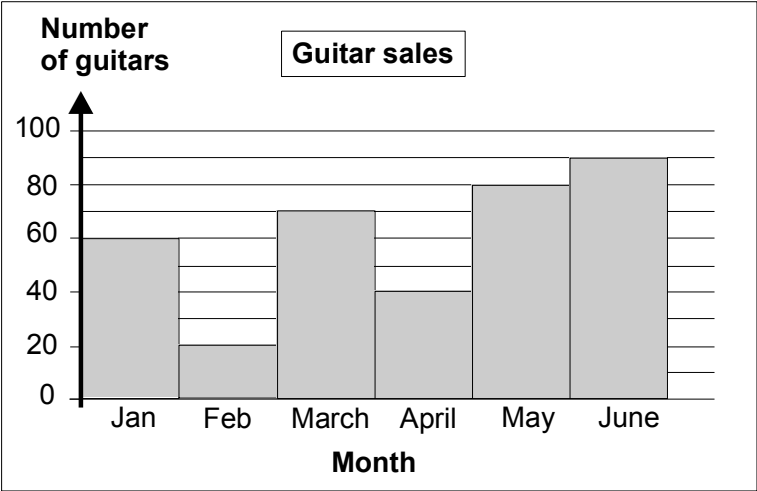
- a How many cans has Kevin collected?
- b Alice’s **target** is to collect **30** cans. How many **more** cans does Alice need to reach her target?

7 This graph shows the distance some children walk to school.



- a Who walks **between** 300 and 400 metres to school?
- b **Estimate** how many metres Tom walks to school.

8 Here is a graph of guitar sales.



The table below shows the **change in sales** from month to month.

Use the graph to complete the table.

Change in Guitar sales	
January to February	Down 40
February to March	Up 50
March to April	
April to May	Up 40
May to June	

9 Shoppers in the supermarket were asked in a survey which was their favourite meal. Here is a list of their responses.

Pasta	Pizza	Pasta	Pasta	Sausages
Fish	Pizza	Pizza	Chicken	Fish
Pizza	Pasta	Fish	Fish	Chicken
Pasta	Pasta	Sausages	Pizza	Pizza
Pizza	Fish	Chicken	Chicken	Pizza

Copy and complete this Frequency Table into your jotter

MEAL	FREQUENCY
Pizza	
Pasta	
Sausages	
Fish	
Chicken	

Use the information in the Frequency Table to draw a bar graph.

10 A children’s shoe shop took a survey of their customers shoe size over one day. Here is a list of their responses.

5	3	3	3	2	4	2	3	3
4	5	2	3	4	3	3	2	2
4	2	4	6	2	3	4	5	3

Create a Frequency Table into your jotter.
 Use the information in the Frequency Table to draw a bar graph.

11 The Leisure Centre performed a survey of pupil’s favourite activities.
 This was the results collected

Football	Football	Swimming	Football
Swimming	Gymnastics	Swimming	Football
Gymnastics	Swimming	Football	Basketball
Football	Swimming	Basketball	Basketball
Swimming	Football	Swimming	Football

Create a Frequency Table into your jotter.
Use the information in the Frequency Table to draw a bar graph.

12 A local shop ran a survey of how many lottery tickets people bought.

1	2	1	2	1	1	1	2	1
3	1	2	1	4	5	5	4	4
2	4	2	3	2	4	1	2	4
2	3	4	2	4	2	4	2	5
2	3	2	4	2	2	2	1	1

Create a Frequency Table into your jotter.
Use the information in the Frequency Table to draw a bar graph.

13 A shop selling baguettes listed at how many of each they sold.

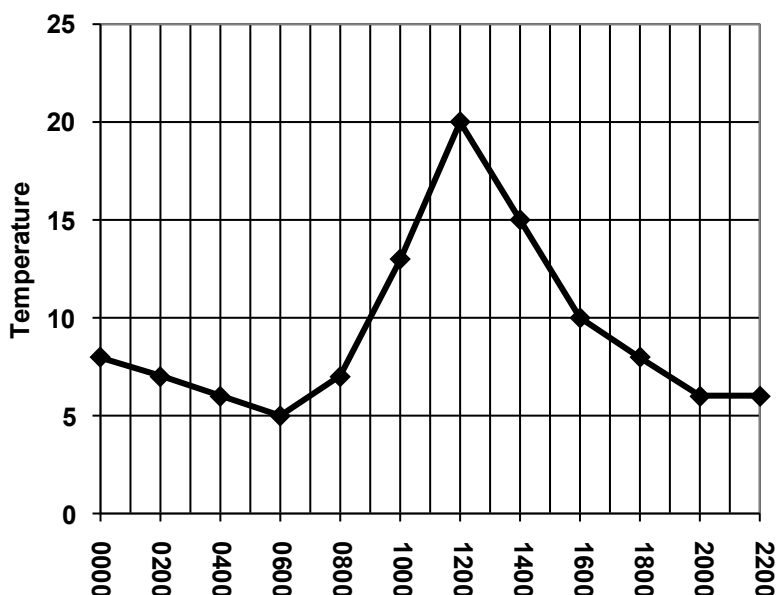
Chicken	Salad	Tuna	Beef
Beef	Beef	Tuna	Salad
Chicken	Chicken	Chicken	Salad
Tuna	Salad	Chicken	Salad
Tuna	Chicken	Beef	Chicken
Chicken	Tuna	Chicken	Chicken

Create a Frequency Table into your jotter.
Use the information in the Frequency Table to draw a bar graph.

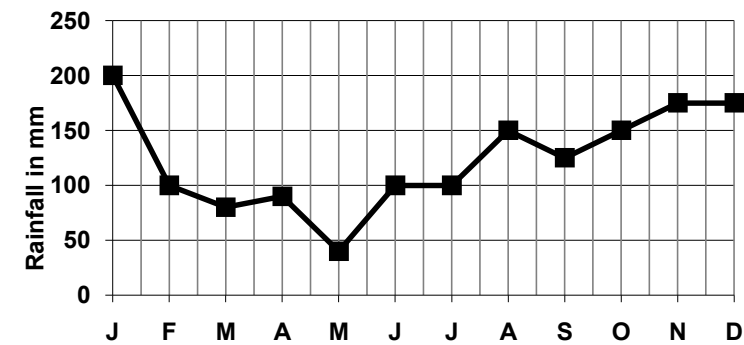
Exercise 4 – Line Graphs

1 The graph shows the temperature measured over a 24 hour period.

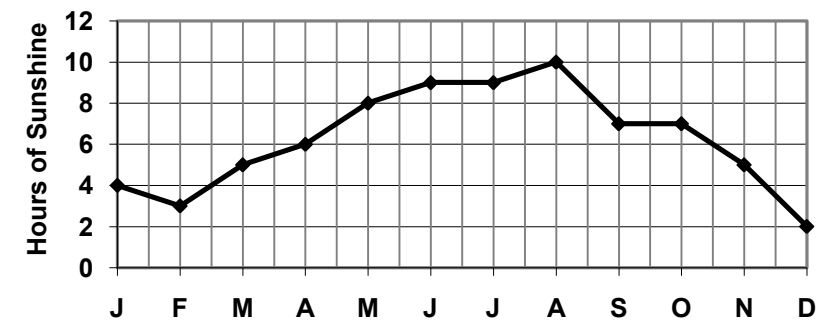
- a What was the highest temperature recorded?
- b What was the lowest temperature recorded?
- c What was the temperature at 12 noon?
- d How much did the temperature drop between 1pm and 8pm?



2 The graph shows the average monthly rainfall in



- a Which month was the driest month of the year?
 - b Which month was the wettest month of the year?
 - c What was the rainfall in July?
 - d What was the total rainfall from January to March?
- 3 The graph shows the hours of sunshine during the summer in Glasgow.



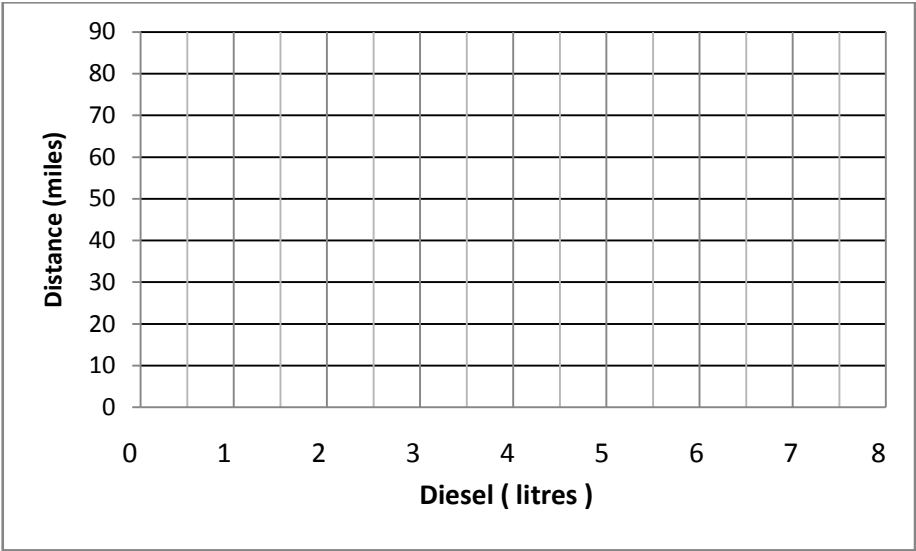
- a Which month was the sunniest?
- b In which month was there 8 hours of sunshine?
- c Between which two months was the biggest increase?

4 A lorry travels **10 miles** on every **1 litre of diesel**.

a Complete the table below:

Diesel (litre)	1	2	3	4	5	6	7	8
Distance (miles)								

b Copy the set of axes below, plot the points from the table and draw a straight line through them with your ruler.

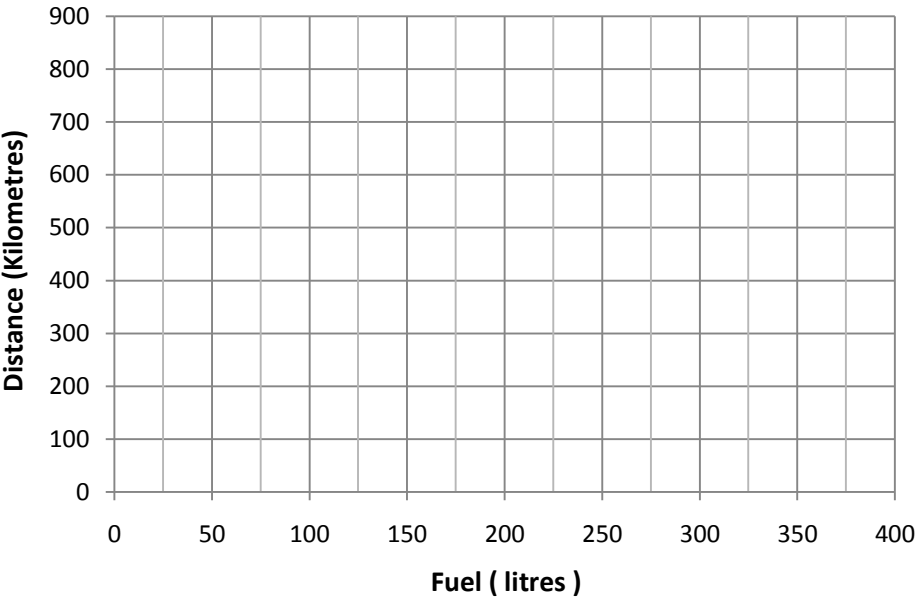


5 An aeroplane travels an average distance of **2 kilometres** on **1 litre of fuel**.

a Complete the table below

Fuel (litres)	50	100	150	200	250	300	350	400
Distance (kilometres)	100		300					

b Copy the set of axes below, plot the points from the table and draw a straight line through them with your ruler.

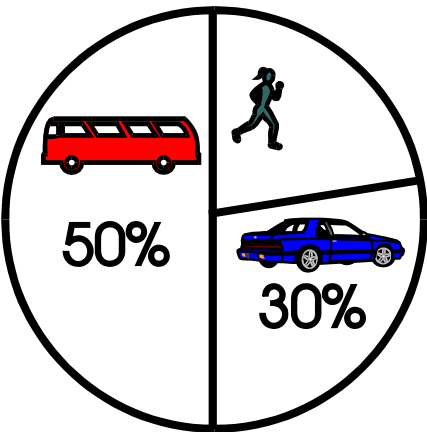


Exercise 5 – Pie Charts

1 This pie chart shows how a group of pupils come to school.

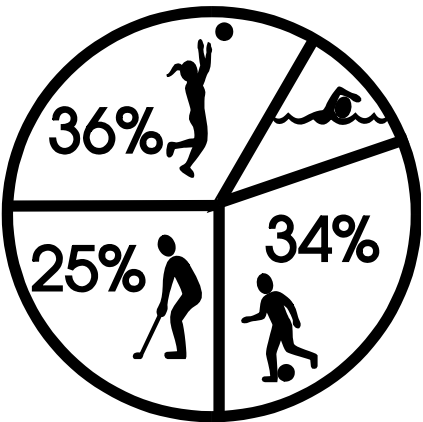
What percentage of pupils come by

- a Bus
- b Car
- c Walking?
- d What are the benefits of walking to school?

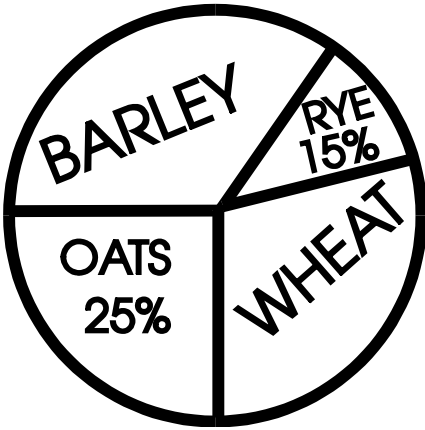


2 This pie chart shows the favourite sport of some pupils.

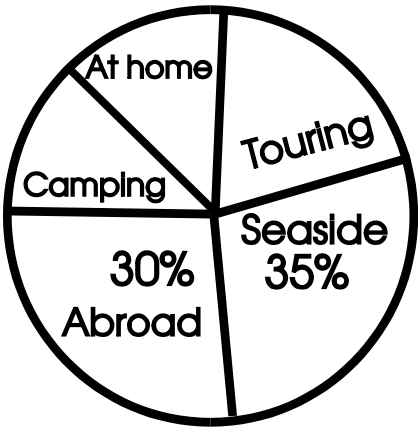
What percentage of pupils have **swimming** as their favourite sport?



- 3 This pie chart shows the different ingredients of a breakfast cereal.
- There is the **same amount** of barley and wheat in the cereal.
- What percentage of the cereal is barley?



- 4 The pie chart shows the holiday arrangements for a group of people.



- a What percentage went touring if **touring** had **10% fewer** people **than** **seaside**?
- b If **camping** and **at home** have the same percentage then what is the percentage that stayed **at home**?

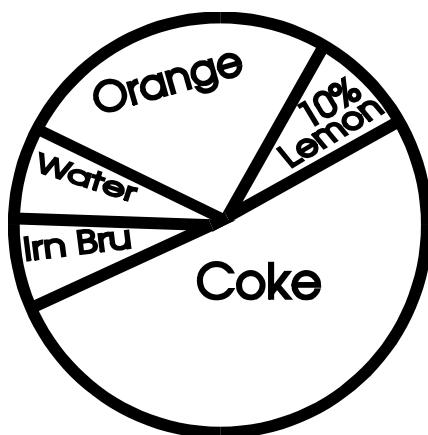
- 5 This pie chart shows the favourite drink of a group of first year pupils.

Water, Irn Bru and Lemon were equally popular.

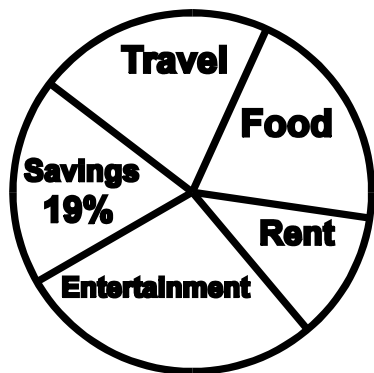
Coke was the favourite drink of half the pupils in the group.

What percentage of pupils has the following drinks as their favourite?

- a Irn Bru
- b Coke
- c Orange



- 6 This pie chart shows how a family use their income.



They use **19%** of their money for **savings**.

They spend $\frac{1}{4}$ their income on **entertainment**. They also spend $\frac{1}{5}$ of their income on **travel**.

They spend twice as much on food as on rent.

- a Write down the percentages spent on:
 - i) entertainment
 - ii) travel.
- b Write down the total percentage for entertainment, travel and savings.
- c Therefore write down the total percentage for food and rent.
- d Now calculate the percentage for: i) rent ii) food.