

Talk Money, Talk Maths

Financial education through mathematics

Teacher Support Pack

Solutions

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Talk Phones, Talk Maths – Bronze 1

Question 1

John and Michael use the Pear mobile phone network. Each has a £10 voucher on his phone. Peak times are from 8 a.m. to 6 p.m.

John	Cost	Total
30 texts	10p each	£3.00
40 off-peak minutes	5p per minute	£2.00
10 peak minutes	20p per minute	£2.00
	Total spent	£7.00
	Balance	£3.00

Michael	Cost	Total
18 texts	10p each	£1.80
10 off-peak minutes	5p per minute	£0.50
20 peak minutes	20p per minute	£4.00
	Total	£6.30
	Balance	£3.70

- (a) Who has more money left? **Michael**
- (b) How many text messages did Michael make? **18**
- (c) Who spent more money on peak-rate calls? **Michael**
- (d) Who spent more money on off-peak calls? **John**
- (e) How much more did John spend than Michael? **70p**
- (f) How much more expensive is the peak rate than the off-peak rate? **15p per minute**
- (g) John made a two-minute call at 3 p.m. How much did this cost? **$2 \times 20p = 40p$**
- (h) John made a two-minute call at 10 p.m. How much did this cost? **$2 \times 5p = 10p$**

Talk Phones, Talk Maths – Silver 1

Question 1

Sinead and Michelle use the Apricot mobile phone network. They both have a £15 voucher on their phone. Peak times are from 8 a.m. to 6 p.m.

Sinead	Cost	Total
25 texts	4p each	£1.00
40 off-peak minutes	6p per minute	£2.40
35 peak minutes	20p per minute	£7.00
	Total	£10.40
	Balance	£4.60

Michelle	Cost	Total
20 texts	4p each	£0.80
50 off-peak minutes	6p per minute	£3.00
15 peak minutes	20p per minute	£3.00
	Total	£6.80
	Balance	£8.20

- (a) Who has more money left? **Michelle**
- (b) How many text messages did Michelle make? **20**
- (c) Who spent more money on peak-rate calls? **Sinead**
- (d) Who spent more money on off-peak calls? **Michelle**
- (e) How much more did Sinead spend than Michelle? **£3.60**
- (f) How much more expensive is the peak rate than the off-peak rate? **14p**
- (g) Sinead made a five-minute call at 4 p.m. How much did this cost? **£1**
- (h) Sinead made a five-minute call at 9 p.m. How much did this cost? **30p**

Talk Phones, Talk Maths – Gold 1

Question 1

Maureen and Jamie use the S-mobile phone network. They both have a £15 voucher on their phone. Peak times are from 8 a.m. to 6 p.m.

Maureen	Cost	Total
45 texts	3p each	£1.35
69 off-peak minutes	2p per minute	£1.38
30 peak minutes	18p per minute	£5.40
	Total	£8.13
	Balance	£6.87

Jamie	Cost	Total
55 texts	3p each	£1.65
47 off-peak minutes	2p per minute	£0.94
60 peak minutes	18p per minute	£10.80
	Total	£13.39
	Balance	£1.61

- (a) Who has more money left? **Maureen**
- (b) How much does each text message cost? **3p**
- (c) Who spent more money on peak-rate calls? **Jamie**
- (d) How can Jamie cut down on his bill without spending less time talking to his friends? **By making fewer peak rate and more off-peak calls**
- (e) How much more did Jamie spend than Maureen? **£5.26**
- (f) Maureen made a ten-minute call at 6.30 p.m. How much did this cost? **20p**
- (g) Jamie made a three-minute call at 8.30 a.m. How much did this cost? **54p**

Talk Phones, Talk Maths – Bronze 2

Question 1

Jenny is looking to buy a new mobile phone. She is keen to get best value for money. She has investigated the following two networks.

	Network O/3	Network R-Mobile
Text	5p each	10p each
Off-peak	15p per minute	5p per minute
Peak	20p per minute	30p per minute

- (a) Which network is the cheaper for text messages? **O/3**
- (b) Which network is the more expensive for off-peak calls? **O/3**
- (c) Which network is the more expensive for peak-rate calls? **R-Mobile**

Question 2

Jenny sends **30 text** messages and makes **40 minutes off-peak** and **10 minutes peak** calls.

- (a) Complete the following tables for each of the two networks.

Network O/3			
	No.	Cost per min/text	Total cost
Texts	30	5p	£1.50
Off-peak	40	15p	£6.00
Peak	10	20p	£2.00
Total			£9.50

Network R-Mobile			
	No.	Cost per min/text	Total cost
Texts	30	10p	£3.00
Off-peak	40	5p	£2.00
Peak	10	30p	£3.00
Total			£8.00

Use the tables to help Jenny answer the following questions.

- (b) Which network is more expensive overall? **O/3**
- (c) How much more expensive are peak-rate calls per minute on R-Mobile compared with Network O/3? **10p**
- (d) How much cheaper is it to send text messages on Network O/3 compared with R-Mobile? **5p**
- (e) Which network would you suggest Jenny uses? **R-Mobile**
- (f) Which network would you use? **Pupil response**
- (g) Are there any circumstances in which it would be better to use O/3? **Pupil response**

Talk Phones, Talk Maths – Silver 2

Question 1

Ciara is looking to buy a new mobile phone. She is keen to get best value for money. She has investigated the following two networks.

	Network P2	Network Q3
Text	1p each	2p each
Off-peak	8p per minute	5p per minute
Peak	15p per minute	12p per minute

On average she sends **45 text messages** and makes **40 minutes off-peak calls** and **10 minutes peak calls**.

- (a) You are required to complete the following tables for each of the two networks.

P2			
	No.	Cost per min/text	Total cost
T texts	45	1p	£0.45
Off-peak	40	8p	£3.20
Peak	10	15p	£1.50
Total			£5.15

Q3			
	No.	Cost per min/text	Total cost
T texts	45	2p	£0.90
Off-peak	40	5p	£2.00
Peak	10	12p	£1.20
Total			£4.10

- (b) Which network is the more expensive overall? **P2**
- (c) Which network is cheaper for text messages? **P2**
- (d) How much more expensive are peak-rate calls per minute on Network P2 compared to Network Q3? **3p**
- (e) Why is text messaging popular? **It is cheap and easy to do.**

Talk Phones, Talk Maths – Gold 2

Question 1

Helen is looking to buy a mobile phone. She is keen to get best value for money. She has investigated the following two networks.

	Allnet	Netphone
Text	p	p
Off-peak	12p per minute	8p per minute
Peak	20p per minute	25p per minute

On average she sends 26 text messages and makes 35 minutes off-peak calls and 15 minutes peak calls.

- (a) You are required to complete the following tables for each of the two networks.

Allnet			
	No.	Cost per minute/text	Total cost
Texts	26	4p	£1.04
Off-peak	35	12p	£4.20
Peak	15	20p	£3.00
Total			£8.24

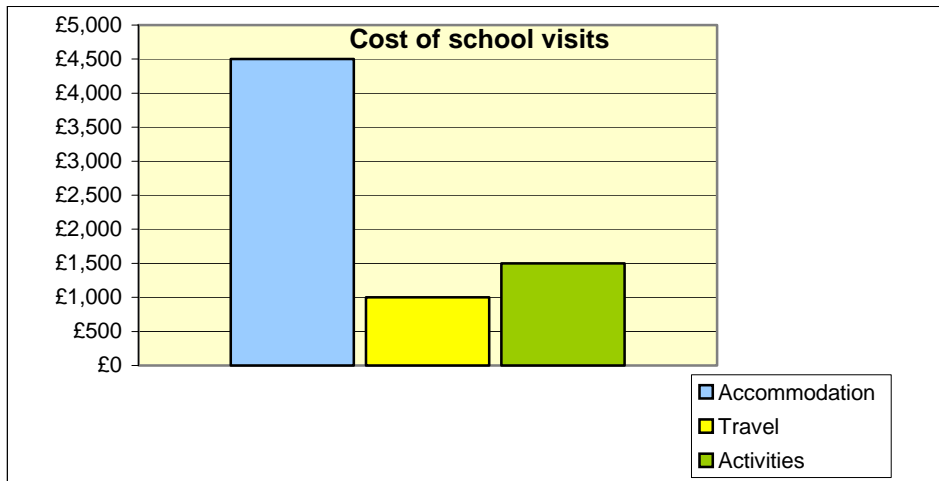
Netphone			
	No.	Cost per minute/text	Total cost
Texts	26	7p	£1.82
Off-peak	35	8p	£2.80
Peak	15	25p	£3.75
Total			£8.37

- (b) Which network is more expensive overall? **Netphone**
- (c) How easy is it to change networks? **Pupil response**
- (d) If the network you were using doubled the price of text messages would you change to another one? **Pupil response**

Talk School Trips, Talk Maths – Bronze 3

Question 1

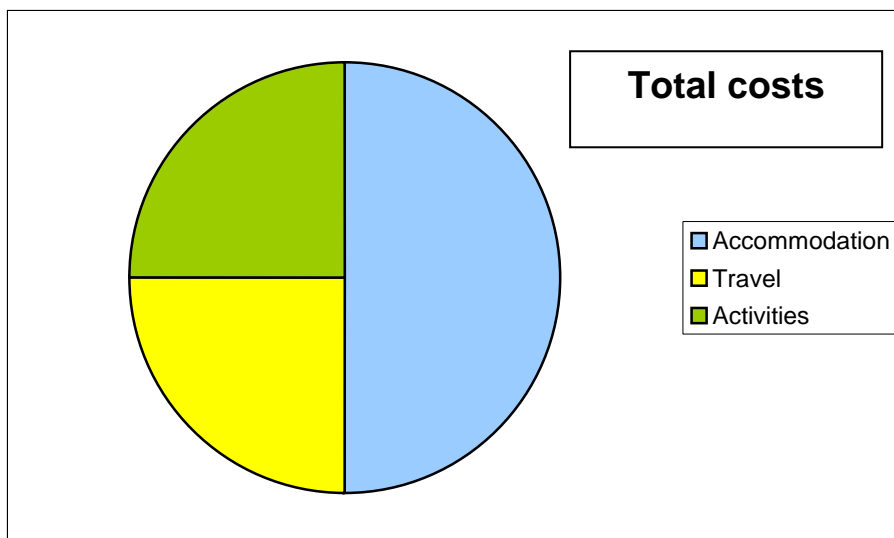
Katy has carried out an investigation into taking her year group on a two-day school trip. There are 100 pupils in her year group. She has completed the following bar chart to illustrate the costs of accommodation, travel and activities.



- (a) What is the accommodation cost? **£4500**
- (b) What is the cost of the travel? **£1000**
- (c) What is the cost of the activities? **£1500**
- (d) What is the total cost for 100 pupils? **£7000**
- (e) What is the cost per pupil? **£70**

Question 2

Mairead has carried out an investigation for her year group that also has 100 students. She has illustrated her findings in a pie chart.

Total costs

- (a) What percentage of the total cost will be spent on accommodation? **50%**
- (b) What percentage of the total cost will be spent on travel? **25%**
- (c) What percentage of the total cost will be spent on activities? **25%**

Question 3

Karen wants to go on a school trip. The cost is £125. She has paid a £35 deposit.

- (a) How much does she still have to pay? **£125 – £35 = £90**
- (b) If she has to pay for the rest of the trip in six, monthly, instalments calculate the amount she will pay each month? **£15**

Question 4

Jean wants to go on a school trip to an outdoor pursuits centre. The cost is £175. She has paid a £25 deposit.

- (a) How much does she still have to pay? **£175 – £25 = £150**
- (b) If she has a part-time job and can save £30 per month, how many months will it be before she can pay for the trip? **five months**
- (c) Why do some people prefer paying by monthly instalments? **It is easier to budget for. Some people would not have £150 to spend in one month.**

Question 5

The basic cost per person for the accommodation and travel for a school trip is £150. The extra costs for the activities are shown below.

Activity	Cost
Watersports	£30
Quad biking	£40
Archery	£15

Complete the following combinations table.

Watersports	Quad biking	Archery	Total
£30	£40		£70
£30		£15	£45
	£40	£15	£55

Which two activities would you choose to keep the cost below £200?

Archery and watersports

Question 6

Your teacher has worked out the basic cost of accommodation and travel for the school trip to be £100. The extra costs for the activities are shown below.

Activity	Cost
Tennis	£15
Trip to theme park	£25
Swimming	£10
Ice skating	£20

Complete the following combinations table to work out which three activities keep the cost below £150.

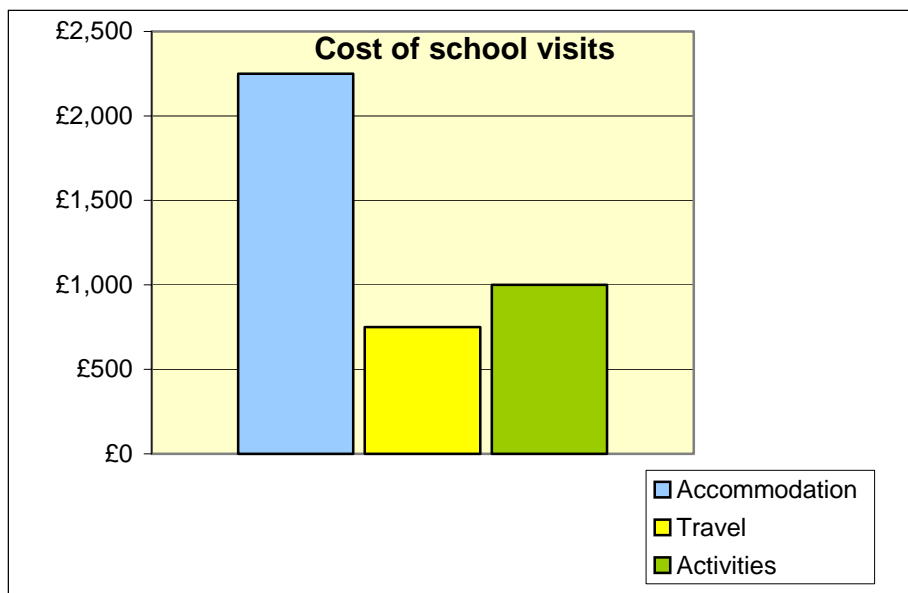
Tennis	Trip to theme park	Swimming	Ice skating	Total
£15	£25	£10		£50
	£25	£10	£20	£55
£15	£25		£20	£60
£15		£10	£20	£45

Tennis, swimming and ice skating.

Talk School Trips, Talk Maths – Silver 3

Question 1

Liam has carried out an investigation into taking his year group on a school trip. There are 50 pupils in his year group. He has completed the following bar chart to illustrate the costs of accommodation, travel and activities.

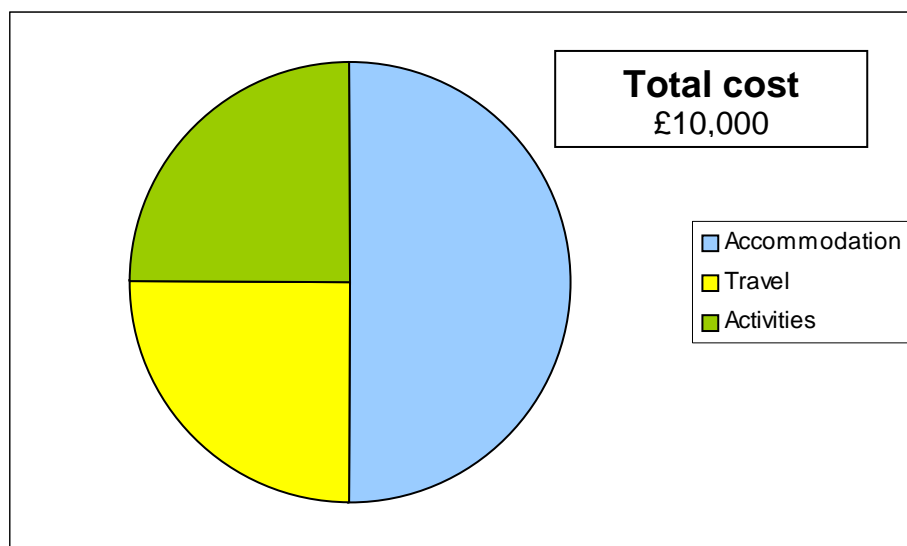


- (a) How much does it cost for accommodation? **£2250**
- (b) How much more does it cost for activities than for travel? **£250**
- (c) What is the total cost for all 50 pupils? **£4000**
- (d) What fraction of the total cost is for activities? $\frac{1}{4}$
- (e) What percentage of the total cost is for activities? **25%**
- (f) What is the cost per pupil? **£80**

Question 2

Richard has carried out an investigation for his year group that has 50 students. The total cost of the school trip is £10,000.

He has illustrated his findings on a pie chart.



- (a) What percentage of the total cost will be spent on accommodation? **50%**
- (b) How much is spent on accommodation? **£5000**
- (c) What percentage of the total cost will be spent on travel? **25%**
- (d) How much is spent on travel? **£2500**
- (e) Calculate the cost per person. **£200**

Question 3

Ruth wants to go on a school trip. The cost is £250. She pays a £25 deposit to book her place on the trip.

- (a) How much does she still have to pay? **£225**
- (b) If she has to pay for the rest of the trip in 10, monthly, instalments how much does she need to pay each month? **£22.50**

Question 4

Aine wants to go on a school trip. The cost is £500. She pays a deposit of 10 per cent to book her place on the trip.

- (a) How much does she pay as a deposit? **£50**
- (b) How much does she still have to pay? **£450**
- (c) What percentage is this of the total cost? **90%**
- (d) If she has a part-time job and can save £50 per month how many months will it take before she can pay for the trip? **nine months**
- (e) Why do some people prefer to pay for school trips in monthly instalments? **Easier to budget for.**

Question 5

Mrs Davidson is organising a trip to Newcastle. The cost of accommodation and travel is £100 and she has discovered the following costs per person.

Food	£6 per day
Sports	£4.25 per day
Swimming	£2 per day

Assuming the trip to Newcastle lasts four days calculate the total cost of the trip. **£100 + £24 + £17 + £8 = £149**

Question 6

The basic cost of accommodation and travel for an outdoor education trip is £160.

The young people will be at the centre for two days and they will choose two activities per day.

Activities per day	£
Swimming	5
Tennis	6
Watersports	9

Complete the following combination table.

Swimming	Tennis	Watersports	Total
£5	£6		£11
£5		£9	£14
	£6	£9	£15

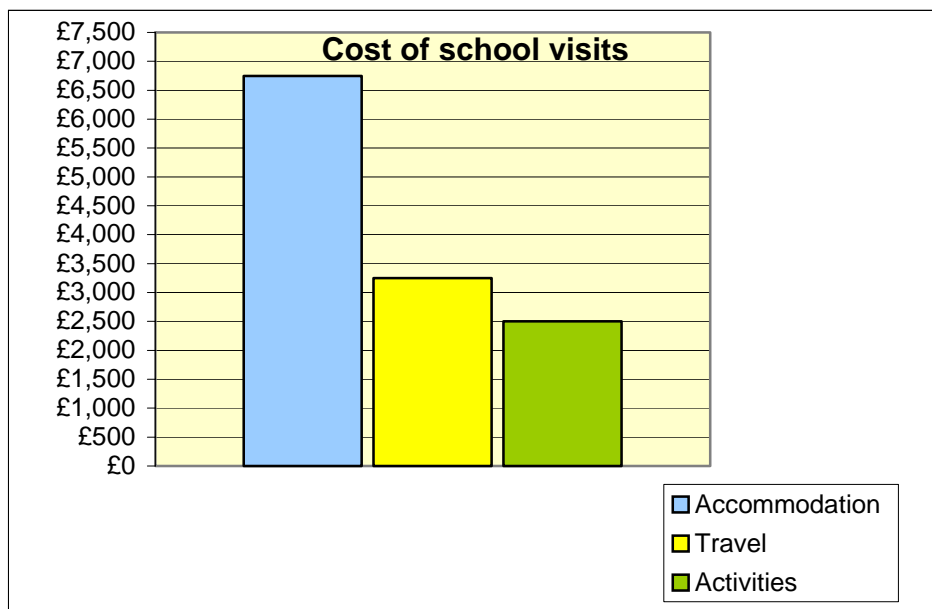
If James pays £186 for the trip, which activities did he choose?

Swimming and tennis and tennis and watersports

Talk School Trips, Talk Maths – Gold 3

Question 1

Mr Kennedy has carried out an investigation into taking his year group on a school trip. There are 200 pupils in his year group. He has completed the following bar chart to illustrate the costs of accommodation, travel and activities.

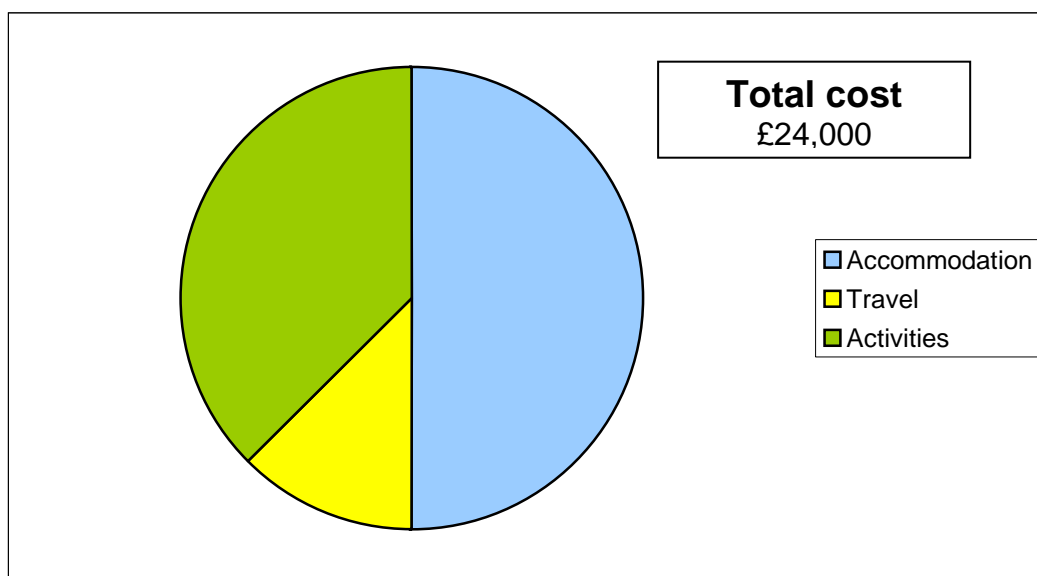


- (a) How much more does it cost for accommodation than for travel? **£3500**
- (b) How much more does it cost for travel than for activities? **£750**
- (c) What is the total cost for all 200 pupils? **£12,500**
- (d) What fraction of the total cost is for activities? **$\frac{1}{5}$**
- (e) What percentage of the total cost is for activities? **20%**
- (f) What is the cost per pupil? **£62.50**
- (g) How much should Mr Kennedy charge if he wants an amount rounded up to the nearest £5? **£65**

Question 2

Joe has carried out an investigation for his year group that has 80 students. The total cost of the school trip is £24,000.

He has illustrated his findings on a pie chart.



- | | |
|---|----------------|
| (a) What percentage of the total cost will be spent on accommodation? | 50% |
| (b) What percentage of the total cost will be spent on travel? | 12.5% |
| (c) What percentage of the total cost will be spent on activities? | 37.5% |
| (d) How much will be spent on accommodation? | £12,000 |
| (e) How much will be spent on travel? | £3000 |
| (f) How much will be spent on activities? | £9000 |
| (g) What is the cost per pupil? | £300 |

Question 3

Niamh wants to go on a school trip. The cost is £450. She pays a deposit of 20 per cent to book her place on the trip.

- | | |
|--|--|
| (a) How much does she pay as a deposit? | £90 |
| (b) How much does she still have to pay? | £360 |
| (c) If she has to pay for the rest of the trip in five, monthly, instalments how much does she need to pay each month? | £72 |
| (d) Why do some people prefer to pay bills by monthly instalments? | Makes budgeting easier; and some people may not have £360 cash. |

Question 4

Claire wants to go on a school trip. The cost is £240. She pays a deposit of 12.5 per cent.

- (a) How much does she pay as a deposit? **£30**
- (b) How much does she still have to pay? **£210**
- (c) How long will it take Claire to save up for the trip if she can pay £20 per month? **11 months**

Question 5

Mrs Robertson is organising a trip to Enniskillen. Accommodation and travel will cost £60 per person and in addition the following information has been obtained.

Food	£7 per day
Sports	£3.75 per day
Swimming	£2.25 per day
Disco	£2.50 each

Assuming the trip to the Lakes lasts for four days; calculate:

- (a) the cost for each individual student **£60 + £28 + £15 + £9 + £2.50 = £114.50**
- (b) the total cost for 50 pupils. **£114.50 x 50 = £5725**

Question 6

Miss O'Neill has organised a school trip, however the tour operator has not added VAT to the costs.

Cost item	£
Accommodation	2400
Travel	1200
Watersports	800
Quad biking	1600
Total before VAT	6000
VAT @ 17.5%	1050
Price charged to group	7050
Number in group	30
Cost per person	235

Use this to help calculate the VAT.

10%	600
5%	300
2½%	150
17½%	1050

Complete the table above.

Talk Banks, Talk Maths – Bronze 4

Question 1

Bill, Rashid and Monica save with different banks. Complete the table and answer the questions below.

	Money saved at start of year	Annual interest earned	Money at end of year
Bill	£200	£10	£210
Rashid	£100	£6	£106
Monica	£400	£8.50	£408.50

- (a) Who has saved the most money? **Monica**
- (b) Who has saved the least money? **Rashid**
- (c) (i) If Rashid had saved £200 how much money would he have had at the end of the year? **£212**
- (ii) Is this more or less than Bill? **More**
- (iii) Who earns the better rate of interest, Bill or Rashid? **Rashid**

Talk Banks, Talk Maths – Bronze 5

Question 1

Mr Brown takes out a bank loan to pay for a new car that costs £7000. He pays back £200 every month for four years.

- (a) How much does he pay each year? $£200 \times 12 = \mathbf{£2400}$
- (b) What is the total amount paid at the end of four years? $4 \times \mathbf{£2400} = \mathbf{£9600}$
- (c) Explain why he had to pay back more than £7000. **He has to pay interest on the loan.**

Question 2

Louise decides to pay her car insurance through her bank. The annual fee is £360.

- (a) How much will she pay each month? $£360 \div 12 = \mathbf{£30}$
- (b) Give a reason why Louise would do this. **Spreads the cost over a full year and may help with her personal budget. She may not have £360 to pay up front.**

Question 3

Denis pays his car insurance through his bank. It costs him £35 each month.

- (a) What is his annual insurance premium? $£35 \times 12 = \mathbf{£420}$
- (b) If Denis paid in full the cost would be £400. How much more does he pay in a year by paying monthly? Do you think this is a good deal? **£20 extra. Discuss if worth paying this extra amount to spread the cost over the year.**

Talk Banks, Talk Maths – Bronze 6

Question 1

David is on a school trip to France and the exchange rate is 1.5 euros for £1. To help him with prices the school has given David this ready reckoner.

Euros	Pounds
3	2
6	4
15	10
30	20
75	50
150	100

- (a) David exchanges £200 for euros at the bank. How many euros will he have to spend? **300 euros**
- (b) David buys a bottle of juice costing 3 euros. How much is this in pounds? **£2**
- (c) A meal costs 9 euros. How much is this in pounds? **£6**
- (d) He wants to buy a pair of trainers costing 60 euros. How much is this in pounds? **£40**
- (e) If he brings home 30 euros, how much is this in pounds? **£20**

Talk Banks, Talk Maths – Silver 4

Question 1

Tim, Sean and Martin save with different banks. Study the table and answer the questions below.

	Money saved at start of year	Interest rate per annum	Money at end of year
Tim	£300	3%	£309
Sean	£200	4%	£208
Martin	£500	2%	£510

- (a) Who earned the most money in interest? **Martin**
- (b) Whose bank offered the best deal? **Sean's**
- (c) If Sean had invested £400 how much money would he have had at the end of the year? **£416**
- (d) If Martin had saved his money in the same bank as Sean, how much would he have earned in interest? **£20**

Talk Banks, Talk Maths – Silver 5

Question 1

Marian takes out a bank loan of £9500 over three years to pay for a new car. She pays back £300 every month.

- (a) How much does she pay back after the three years? **£10,800**
- (b) How much interest did she pay over the three years? **£1300**
- (c) Explain why she has to pay interest. **This is the cost of borrowing money.**

Question 2

Larry decides to pay his car insurance through his bank. The annual fee is £450.

- (a) How much will he pay each month? **£37.50**
- (b) Give a reason why Larry would do this. **Pupil response**

Question 3

Donal pays his car insurance through his bank. It costs him £32.50 each month.

- (a) What is his annual insurance premium? **£390**
- (b) If Donal paid in full, the cost would be £360. How much more does he pay in a year by paying monthly? Do you think this is a good deal? **£30 extra – Discuss if worth paying this extra amount to spread the cost over the year.**

Talk Banks, Talk Maths – Silver 6**Question 1**

Gillian is on a school trip to France and the exchange rate is 1.5 euros for £1. To help with prices the school has suggested that she complete this ready reckoner.

Euros	Pounds
3	2
6	4
15	10
30	20
75	50
150	100

- (a) Gillian exchanges £240 for euros at the bank. How many euros will she have to spend? **360 euros**
- (b) She buys an ice cream costing 4.5 euros. How much is this in pounds? **£3**
- (c) A meal costs 21 euros. How much is this in pounds? **£14**
- (d) She wants to buy sunglasses costing 51 euros. How much is this in pounds? **£34**
- (e) If she brings home 36 euros, how much will the bank give her in pounds? **£24**
- (f) Gillian doesn't go to the bank straight away on her return home. When she does, the exchange rate has changed to 1.6 euros for £1. How much will the bank now give her in pounds in exchange for 36 euros? **£22.50**

Talk Banks, Talk Maths – Gold 4

Question 1

Cheryl, Tracey and Kathryn save with different banks. Complete the table and answer the questions below.

	Money saved at start of year	Interest rate per annum	Money at end of year
Cheryl	£300	3%	£309
Tracey	£200	4%	£208
Kathryn	£400	2%	£408

- (a) Who earned the most money in interest? **Cheryl**
- (b) Whose bank offered the best deal? **Tracey**
- (c) If Tracey had invested £300, how much money would she have had at the end of the year? **£312**
- (d) If Cheryl had saved her money in the same bank as Tracey how much more would she have earned? **£8**

Talk Banks, Talk Maths – Gold 5

Question 1

Jimmy buys a new kitchen costing £12,500. He pays an initial 20 per cent deposit and borrows the rest over five years from the bank. He pays back £200 every month.

- (a) How much is the deposit? **£2500**
- (b) How much does he pay back to the bank after the five years? **£200 x 12 x 5 = £12,000**
- (c) How much interest did he pay over the five years? **£12,000 – £10,000 = 2,000**
- (d) What is the total cost of the kitchen? **£14,500**
- (e) Do you think this is a good way to pay for a kitchen? **£2000 in interest seems high, however the kitchen will last a long time and spreading cost may be the only way to pay for it.**

Question 2

Bernie decides to pay her car insurance through her bank. The annual fee is £525.

How much will she pay each month? **£43.75**

Question 3

Andy pays his car insurance through his bank. It costs him £44.25 each month.

What is his annual insurance premium? **£531**

Talk Banks, Talk Maths – Gold 6

Question 1

Danny is on a school trip to France and the exchange rate is 1.4 euros for £1. Complete the ready reckoner below.

Pounds	Euros
1	1.4
2	2.8
5	7
10	14
20	28
50	70

- (a) Danny exchanges £225 for euros at the bank. How many euros will he have to spend? **£315 euros**
- (b) He buys an ice cream costing 3.5 euros. How much is this in pounds? **£2.50**
- (c) A meal costs 21 euros. How much is this in pounds? **£15**
- (d) He wants to buy a sports top costing 77 euros. How much is this in pounds? **£55**
- (e) If he brings home 49 euros, how much will the bank give him in pounds? **£35**
- (f) If the bank charged 1% commission on foreign exchange transactions, how much would Danny have had to pay in total charges?
- 1% of £225 = £2.25**
€49 becomes £35
1% of £35 = £0.35
- total commission:**
£2.25 + £0.35 = £2.60

Talk Computers, Talk Maths – Section A

Question 1

Joyce has asked you to prepare a spreadsheet to help her keep a budget.

- (a) Load spreadsheet '**Talk Computers Section A.xls**' and enter this information into the worksheet Talk Computers A1. Where the cells are shaded you are required to enter either data or formulae.

Joyce earns £700 per month. She has to pay the following bills each month.

Gas	£25
Electricity	£15
Food	£240
Entertainment	£80
Bus fares	£35
Rent	£200

The formula to be entered is as follows.

$$C11 = B5 + B6 + B7 + B8 + B9 + B10$$

or

$$C11 = \text{SUM}(B5:B10)$$

$$C13 = C3 - C11$$

- (b) How much money does she have at the end of the month?
- (c) Which of the above expenses do you think that Joyce can control?
- (d) How much can Joyce save if her rent is increased to £250 per month?
- (e) Illustrate using a pie chart how much Joyce spends on each bill.

£105

All expenses can be controlled in the long term, however she may not be able to control rent and bus fares in the short term.

£55

Solution built into spreadsheet

Question 2

Paul has asked you to prepare a spreadsheet to help him keep his budget.

- (a) Load spreadsheet '**Talk Computers Section A.xls**', worksheet Talk Computers A2 and enter this information.

He earns £650 per month. He has to pay the following bills each month.

Gas	£20
Electricity	£25
Food	£280
Entertainment	£40
Mobile phone	£15
Bus fares	£25
Rent	£160

- (b) How much money did he spend during the month? **£565**
- (c) How much money does he have at the end of the month? **£85**
- (d) Which of the above expenses does Paul not control? **Bus fares and rent in the short term.**
- (e) Why is it important to prepare a budget? **Budgets set goals, help plan future action for both saving & spending and allow comparisons between actual and budgeted savings and spending.**
- (f) If Paul moves to a new flat that will cost £195 per month how much can he save per month now? **£50**
- (g) Illustrate using a pie chart how much Paul spends on each bill. **Illustrated on spreadsheet**

Question 3

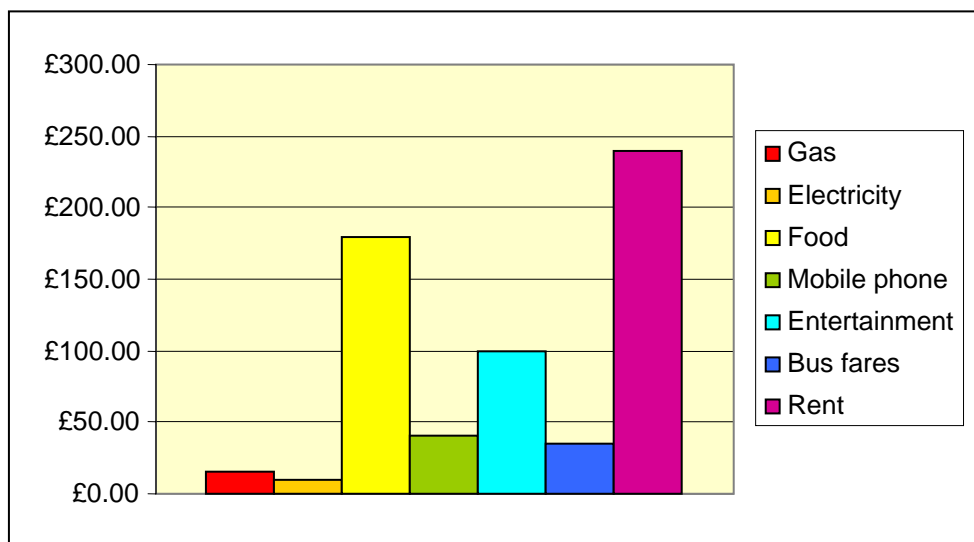
Chris has asked you to prepare a spreadsheet to help him keep a budget.

- (a) You are required to use spreadsheet 'Talk Computers Section A.xls', worksheet Talk Computers A3 to complete this exercise.

He earns £690 per month. He has to pay the following bills each month.

Food	£180
Entertainment	£100
Bus fares	£35
Rent	£240
Mobile phone	£40
Electricity	£10
Gas	£10

- (b) How much money is he planning to spend each month? **£620**
- (c) How much money does he have at the end of the month? **£70**
- (d) He wants to buy a new music system that costs £350. How many months would he need to save for in order to buy it? **5 months**
- (e) How much money will he have at the end of each month if the rent is increased to £300? **£10**
- (f) Prepare a bar graph illustrating the amount spent on each item of expenditure.



Additional internet tasks

Question 4

At today's values how much is £100 worth in:

- (a) US dollars
- (b) Euros
- (c) Turkish lira

Pupil response

Pupil response

Pupil response

Question 5

- (a) How much would a return flight from Belfast to London cost, flying two weeks from today? You want to leave Belfast about 8 a.m. and return at about 6 p.m.
- (b) Do you think this is a good buy?
- (c) What are the alternatives to flying?
- (d) Find out some other costs of travelling from Belfast to London.

Pupil response

Pupil response

Rail/car/bus

Pupil response

Talk Computers, Talk Maths – Section B

Question 1

- (a) You have been asked to help keep records and calculate profits for the healthy tuck shop that the school has been running. In order to help with this you have been given spreadsheet 'Talk Computers Section B.xls', worksheet Talk Computers B1. Data and formulae are entered into the shaded cells.

In the first week of the new term you purchased:

- 10 kg of apples at 85p per kg
- 8 kg of oranges at 60p per kg
- 6 kg of pears at 75p per kg.

Sales for the week amounted to £20.

You are required to use a spreadsheet to calculate the weekly profit.

Profit = £2.20

You are required to enter the formula into cells as follows.

$$D5 = B5 * C5$$

$$D6 = B6 * C6 \text{ *You can use the fill down facility here*}$$

$$D7 = B7 * C7$$

$$D8 = D5 + D6 \text{ or } D7 = \text{SUM}(D5:D7)$$

$$B15 = D8$$

$$B16 = B14 - B15$$

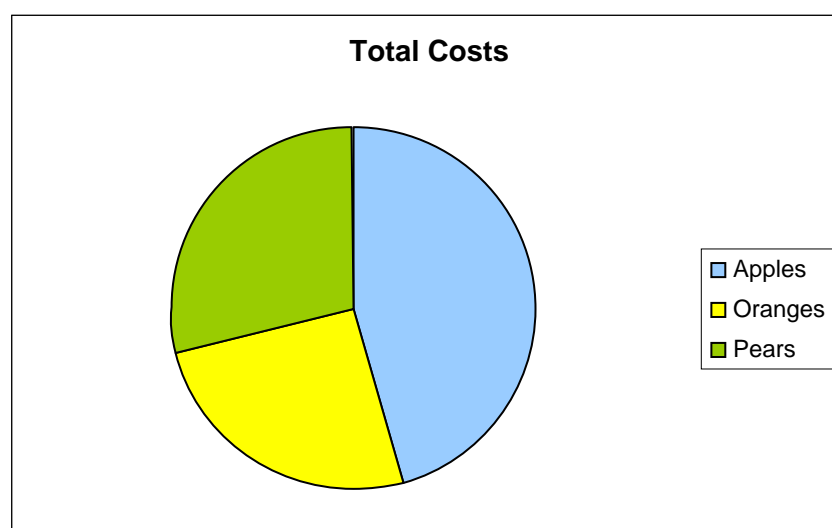
- (b) What would the profit have been if sales had fallen to £18?

20p

- (c) Illustrate the total cost of each item of fruit using a bar graph.

Solution built into spreadsheet.

(d) Illustrate this information using a pie chart.



(e) What would the profit have been if pears were 90p per kg and sales were £20?

£1.30

Question 2

(a) Using the spreadsheet 'Talk Computers Section B.xls', worksheet Talk Computers B2, calculate the profit for week 5. Notice that the prices and quantities have changed.

Purchases were:

- 12 kg of apples at 80p per kg
- 8 kg of oranges at 75p per kg
- 10 kg of pears at 70p per kg.

Sales for week 5 amounted to £25.

Profit = £2.40

(b) What advantages are there in using spreadsheets?

- **Calculations are easy**
- **Updates can be saved**
- **Edits are easily made**

(c) Why do you think prices have changed?

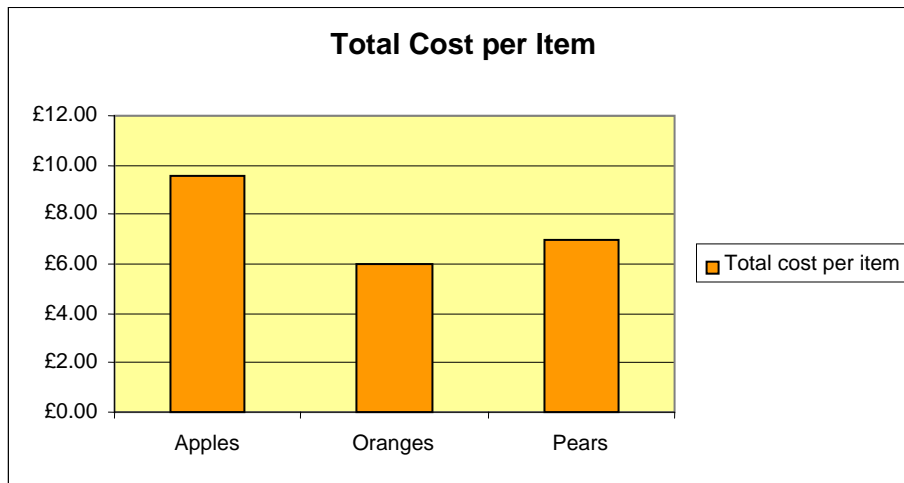
Different time of year and fruits may be in or out of season.

(d) What will influence the amount of fruit sold?

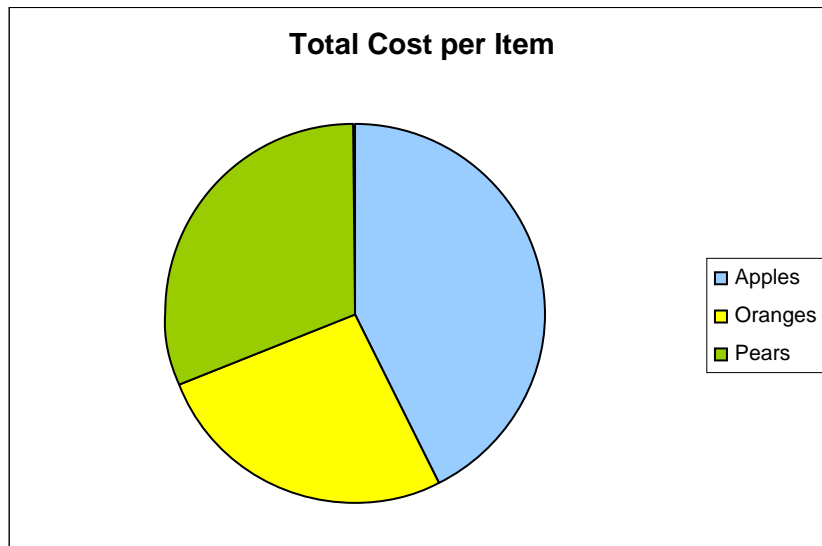
- **The price**
- **The weather**
- **The quality of the fruit**
- **What else is available**

(e) Illustrate the total cost of each item using:

i. a bar chart



ii. a pie chart



Question 3

You and some friends have organised a stall at the school fund-raising event. Use the spreadsheet 'Talk Computers Section B.xls', worksheet Talk Computers B3, to show your records and calculations.

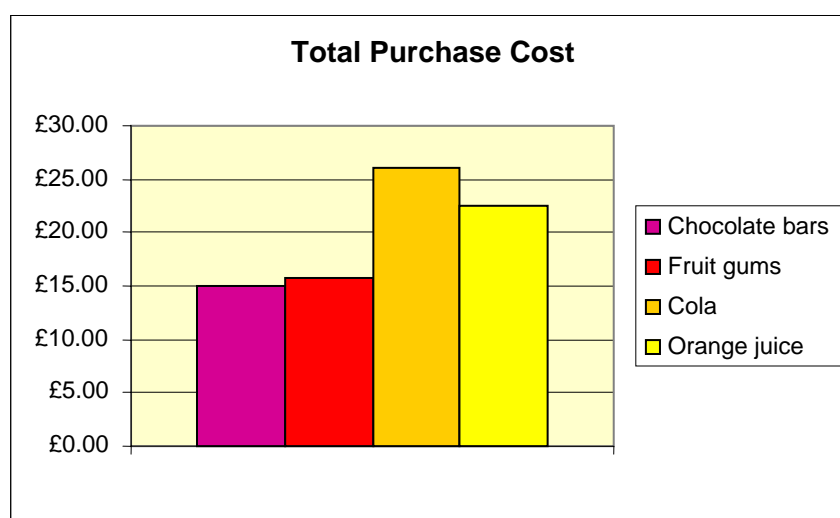
Your sales were for £85. You purchased:

- two boxes of chocolate bars at £7.50 per box
- three boxes of fruit gums at £5.25 per box
- four boxes of cola at £6.50 per box
- five boxes of orange juice at £4.50 per box.

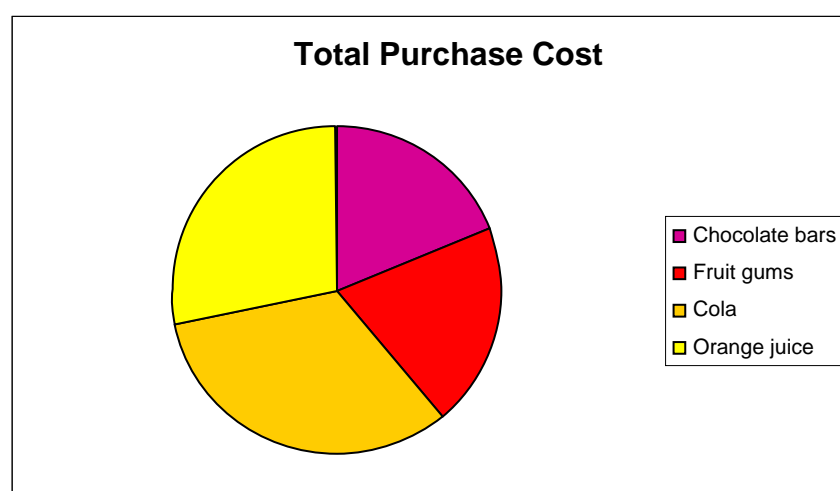
(a) What was the total cost of the goods purchased? **£79.25**

(b) What was the profit made? **£5.75**

(c) Illustrate the total cost of goods purchased in a bar graph.



(d) Illustrate this information in a pie chart.



(e) At the end of the event there were 10 chocolate bars left. What could you have done to make sure these were sold?

Reduce the price.

Additional internet tasks

Question 4

- (a) Find the names of four hotels in Dublin.
- (b) How much do they cost per night?
- (c) Which one would you decide to stay in? Why?

Pupil response

Pupil response

Pupil response

Question 5

- (a) How far is it from Enniskillen to Lisburn?
- (b) How long would it take to drive this distance?
- (c) How much would it cost in petrol if you decided to drive this distance?
- (d) What are the problems with this information?

Pupil response

Pupil response

Pupil response

Age of car and weather conditions may affect this answer.

Question 6

List five websites you could use that could save you money when buying goods or services.

Pupil response

Additional tasks

- (a) Why is it important to prepare a budget?
- (b) Discuss how to keep financial and personal information safe when you are using the internet.
- (c) Discuss appropriate websites where young people can purchase goods or services more cheaply than on the high street.
- (d) Discuss different sources of income.
- (e) How are goods and services advertised on the internet?
- (f) Discuss different internet providers and how much they cost.
- (g) Do they give good value for money?

Budgets set goals, help plan future action both for saving and spending and allows comparisons between actual and budgeted savings and spending.

Pupil response

Pupil response

Pupil response

Pupil response

Pupil response

Pupil response