Example 1 John buys a motor cycle. He pays £1850 deposit and 36 monthly payments of £93.25.
How much does he pay for motor cycle?

£1850 + 36 x £93.25 = £5207

John could bought it for £4500 cash. What percentage extra did he pay through buying it in instalments?

Paid extra £5207 − £4500 = £707

$$\frac{707}{4500} \times 100 = 15.7\%$$

Alternatively $\frac{5207}{4500} = 1.157$

showing 15.7 % extra paid

Q1. Greg goes shopping with £20.
He spends £5.60 on his lunch.

He needs £1.30 for his bus fare.

He sees this advert for shoes.

Shoes
Normal Price £15
Sale price 10% off normal price

Does he have enough money to buy them?

You **must** show your working

5.60
1.30
£ 6.90

£20.00
£ 6.90
£13.10 left

10% of £15 = £1.50

£15 - £1.50 = £13.50

No he is 40p short of being able to buy shoes.

12:41 Tue 26 Mar 40%

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Q2. Salima sees an advert for a summer holiday.

Summer Sun
Fantastic deals with Sunbreaks Holidays

Dates	7 nights	14 nights
1 April – 30 April	£315	£575
1 May – 6 July	£220	£400

Notes
- Prices are for one adult (16 years and over)
- Children (less than 16 years) 75% of adult price
- 10% discount if booked online (www.sunbreaks.co.uk)

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Salima books a 7-night holiday in April for two adults.
The travel agent adds a percentage surcharge to the cost of the holiday for booking fees.
Salima's final bill is £642.60.

What was the percentage surcharge?

OPEN IN...

315
2 x
£630

Extra £12.60

$\frac{12.60}{630} \times 100$

≈ 2%

Q4. Barbara uses her car to work as a volunteer driver at her local hospital.

She is paid 40 p for every mile she drives.

On average she drives 2000 miles each month.

Here is some information about the running costs of Barbara's car.

Fuel consumption	50 miles per gallon
Other running costs	10 pence per mile

(a) Petrol costs £5 per gallon

Calculate Barbara's annual fuel bill.

2000 x 12 = 24000 miles

$\frac{24000}{50}$ = 480 gallons @ £5 = 480 x 5

Answer £ 2400

(b) After paying for fuel and other running costs, Barbara saves the money left over.

Barbara is planning to use this money for a holiday that will cost £3000.

Will Barbara have enough money after saving for one year?

Income 24000 x 0.40 = £9600

Running costs 24000 x 0.10 = £2400

Fuel £2400

Outgoings £4800

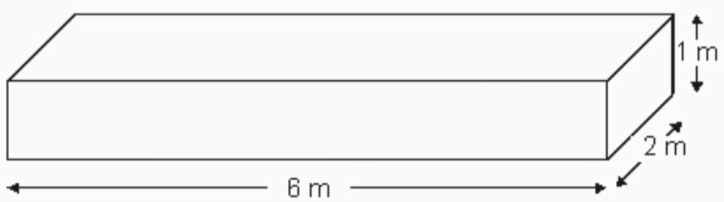
Left over = £9600 − £4800

= £4800

So yes can afford £3000 holiday

Q5. The shape of a flower bed is a cuboid as shown.

Not drawn accurately



1 m^3 of soil weighs 1.25 tonnes

A gardener wants to fill the flower bed with soil as cheaply as possible.

Vol = 6 x 2 x 1 = 12 m^3 Require 12 x 1.25 = 15 tonnes

The table shows the costs for Company A and Company B.

Company A	£ 49.50 per tonne	Delivery £ 30
Company B	10 tonnes for £ 430 then £ 67.50 per extra tonne	Delivery free

Which company should she use and how much will it cost?

.....

A) $15 \times £49.50 + £30 = £772.50$

B) $£430 + 5 \times £67.50 = £767.50$

B is £5 cheaper

Q3. Three shops advertise the same luxury chair.
Each shop has a special offer.

600 × 0.7

£420
× 2
£840

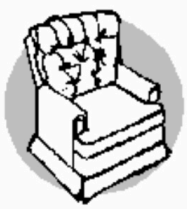
550 × 4/5

£440
× 2
£880

£820

Shop A
Chair – normal price £600

Special Offer – 30% off normal price



Shop B
Chair – normal price £550

Special Offer – $\frac{1}{5}$ off normal price

Shop C
Chair – normal price £820

Special Offer – buy one get one free

(a) Mutasem wants to buy **two** of these luxury chairs.

At which shop is the price of the two chairs the cheapest?
You **must** show your working.

Buy C

.....

Q4. (a) Travelling 10 000 kilometres costs £800 for petrol. £800 × 12500/10000

How much does it cost to travel 12 500 kilometres?

.....

Answer £ 1000

(1)

(b) Last year Mr Taylor travelled 15 000 km in his car and spent £1200 on petrol.
This year he expects to travel 20 000 km.
He estimates that the price of petrol has increased by 10% on what it was last year.

How much should Mr Taylor expect to pay for petrol this year?

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£1200 × $\frac{20000}{15000}$ = £1600

Add on 10% £1600 × 1.1

= £1760