



Abbi invests £6,000 into a bank account that pays compound interest at 4.1% per year. Work out the amount of money in Abbi's bank account after 3 years.



A 4.1% increase means to find 104.1%

To find 104.1% of a number, multiply by  $\frac{104.1}{100}$

$$\frac{104.1}{100} = 1.041$$

$$\text{After 1 Year: } 6000 \times 1.041 = 6246$$

$$\text{After 2 Years: } 6246 \times 1.041 = 6502.086$$

$$\text{After 3 Years: } 6502.086 \times 1.041 = 6768.671526$$

**Abbi has £6768.67 in her bank account**

Simon repairs Mobile phones. He knows it takes him on average 15minutes to repair a mobile phone. He works from 8.30am to 5.30pm and takes 45mins of breaks throughout the day including lunch. He works 5 days a week, and in addition he works from 10am to 1pm on Saturdays without taking a break.



On average, he charges £45 to fix a mobile phone.

How much money should he expect to be paid in a week?

8.30am to 5.30pm is 9 hours

$$9 \text{ hours} = 9 \times 60 = 540 \text{ minutes}$$

$$540 \text{ minutes} - 45 \text{ min} = 495 \text{ minutes of work per day}$$

$$495 \times 5 = 2475 \text{ minutes Monday to Friday}$$

$$\text{Saturday: } 3 \times 60 = 180 \text{ minutes. } 180 + 2475 = 2655$$

$$2665 \div 15 = 177 \text{ mobile phones fixed per week}$$

$$177 \times 45 = 7965$$

**Simon makes £7,965 in a week**

An item of machinery is for sale for £23,500 + VAT



VAT is 20%

What is the total cost of the machine?

$$10\% \text{ of } 23,500 = 2,350$$

$$20\% \text{ of } 23,500 = 4,700$$

$$23,500 + 4,700 = 28,200$$

**The machine cost £28,200 inclusive of VAT**

A shop sells cans of baked beans for 90 pence each. A pallet of 240 cans of beans costs £120. How much profit is made on a pallet of baked beans?



$$\text{Income: } 240 \times 0.9 = 216$$

$$\text{Profit} = \text{Income} - \text{Costs}$$

$$\text{Profit} = 216 - 120 = 96$$

**The shop made £96 profit**

A scout group are looking to raise £350 to hire a minibus for their trip to Whitby. In order to do this they have purchased 50 Jumpers at £16.50 each to sell to raise the amount required to hire the minibus. How much money should the scout group sell each jumper for in order to raise the full amount required after selling all of the tracksuits?



They need to make £350 from selling 50 jumpers.

$$350 \div 50 = 7$$

They need to make £7 per jumper, so they should sell each jumper for £7 more than the cost of purchasing them.

$$£16.50 + £7 = £23.50$$

**They should sell the jumpers for £23.50 each**