

11 kg of apples cost £264
 12 kg of apples cost £288

Offer 1

$$11 \times 24 = \text{£}264$$

Offer 2

$$12 \times 24 = \text{£}288$$

$$288 \times 0.95 = \text{£}273.60$$

Offer 1 is cheaper because $\text{£}264 < \text{£}273.60$

1. 2.5 kg of apples cost £3.60

Work out the cost of 3.5 kg of apples.

2.5kg	costs	£3.60
↓ ÷ 2.5		↓ ÷ 2.5
1kg		£1.44 ✓
↓ × 3.5		↓ × 3.5
3.5kg		£5.04

£ 5.04 ✓

(Total for Question is 2 marks)

2. It would take 120 minutes to fill a swimming pool using water from 5 taps.

(a) How many minutes will it take to fill the pool if only 3 of the taps are used?

$$120 \times 5 = 600 \text{ minutes}$$

1 tap takes 600 minutes

$$600 \div 3 = 200 \text{ minutes}$$

..... 200 minutes
(2)

(b) State one assumption you made in working out your answer to part (a).

..... Each tap fills up pool at the same rate

..... (1)

(Total for Question is 3 marks)

$$213 \rightarrow 200$$

200 miles per 1 hour

200 miles per 60 minutes

200 miles per 3600 seconds

$$\downarrow \div 200$$

$$\downarrow \div 200$$

1 mile per 18 seconds

..... 18

..... Overestimate, because we rounded the speed down

DO NOT WRITE IN THIS AREA

3. Jamil makes a drink by mixing 1 part of orange squash with 9 parts of water.

He uses 750 millilitres of orange squash.

Jamil is going to put the drink he has mixed into 1 litre bottles.

Work out the greatest number of 1 litre bottles that Jamil can completely fill.

$$\begin{array}{r} \times 750 \\ 9 \\ \hline 6750 \\ 4 \end{array}$$

$$\begin{array}{r} 6750 \\ + 750 \\ \hline 7500 \\ 11 \end{array}$$

① how much water is used: $\hookrightarrow 1000\text{ml}$ OS : water

$$\begin{array}{l} \times 750 \downarrow \quad 1 : 9 \quad \downarrow \times 750 \rightarrow ? = 9 \times 750\text{ml} \\ 750\text{ml} : 6750\text{ml} \checkmark \end{array}$$

② how much fluid/juice there is:

$$\begin{aligned} \text{Total volume} &= \text{Vol(OS)} + \text{Vol(water)} = 750\text{ml} + 6750\text{ml} \\ &= 7500\text{ml} \checkmark \end{aligned}$$

③ how many bottles.

$$\begin{array}{l} \times 7.5 \downarrow \quad 1 \text{ bottle} \rightarrow 1000\text{ml} \\ 7.5 \text{ bottles} \rightarrow 7500\text{ml} \quad \downarrow \times ? = \frac{7500}{1000} = 7.5 \times \end{array}$$

\hookrightarrow round down to 7 as not enough for 8. 7 bottles. \checkmark

(Total for Question is 3 marks)

4. Scott wants to make orange juice.
He is going to buy boxes of oranges.

There are 24 oranges in each box of oranges.

30 oranges make 2 litres of orange juice.

Scott needs to buy enough oranges to make 8 litres of orange juice. $\rightarrow 120$ oranges

- (a) Work out the number of boxes of oranges that Scott needs to buy.
You must show all your working.

$$\begin{array}{l}
 \text{L of OJ} : 0 \\
 \times 4 \downarrow \quad 2 : 30 \\
 \quad \quad \quad 8 : 120 \quad \downarrow \times 4 \\
 \\
 \times 5 \downarrow \quad 1 \text{ box} \rightarrow 24 \text{ Oran} \\
 \quad \quad \quad 5 \text{ boxes} \quad 120 \quad \downarrow \times ? \rightarrow \frac{120}{24} = 5
 \end{array}$$

5 boxes \checkmark_3
.....
(3)

Scott also buys

1260 apples

280 bananas

- (b) Write down the ratio of the number of apples that Scott buys to the number of bananas that he buys.
Give your ratio in its simplest form.

apples : bananas

1260 : 280

9 : 2

9:2 $\checkmark_1 \checkmark_2$
.....
(2)

(Total for Question is 5 marks)

5. Pens and pencils are sold in a shop.

12 pencils cost £1.80

The ratio of the cost of a pen to the cost of a pencil is 7:3

Work out the cost of 5 pens.

$$12 \text{ pencils} \rightarrow \text{£}1.80$$

$$1 \text{ pencil} \rightarrow \frac{\text{£}1.80}{12} = \text{£}0.15 \checkmark_1$$

Pen : Pencil

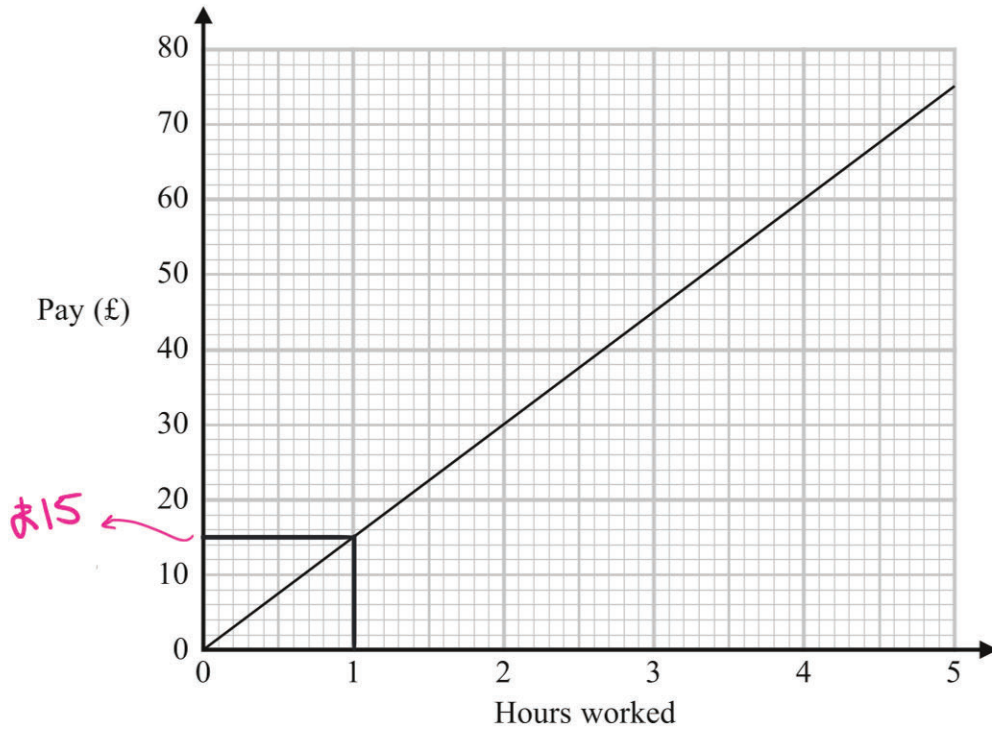
$$\begin{array}{l} \times 0.05 \downarrow \quad 7 : 3 \\ \text{£}0.35 : \text{£}0.15 \quad \downarrow \times ? \rightarrow ? = \frac{0.15}{3} = 0.05 \checkmark_2 \end{array}$$

$$\begin{aligned} 5 \text{ pens} &= 5 \times \text{£}0.35 \\ &= \text{£}1.75 \end{aligned}$$

£ 1.75 \checkmark_4

(Total for Question is 4 marks)

6. Nazima uses this graph to find out how much money she is paid for the number of hours she has worked.



- (a) How much money is Nazima paid for each hour she works?

work out how much she gets for one hour of work

£ 15 (1)

Last week Nazima worked for 36 hours.

- (b) How much money was Nazima paid?

1 hour of work = £15 (1)
 (x36) (x36)
 36 hours of work = £540

£ 540 (1)
 (2)