Cambridge O Level MATHEMATICS (SYLLABUS D) 4024

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Paper 2 Calculator **May/June 2024**

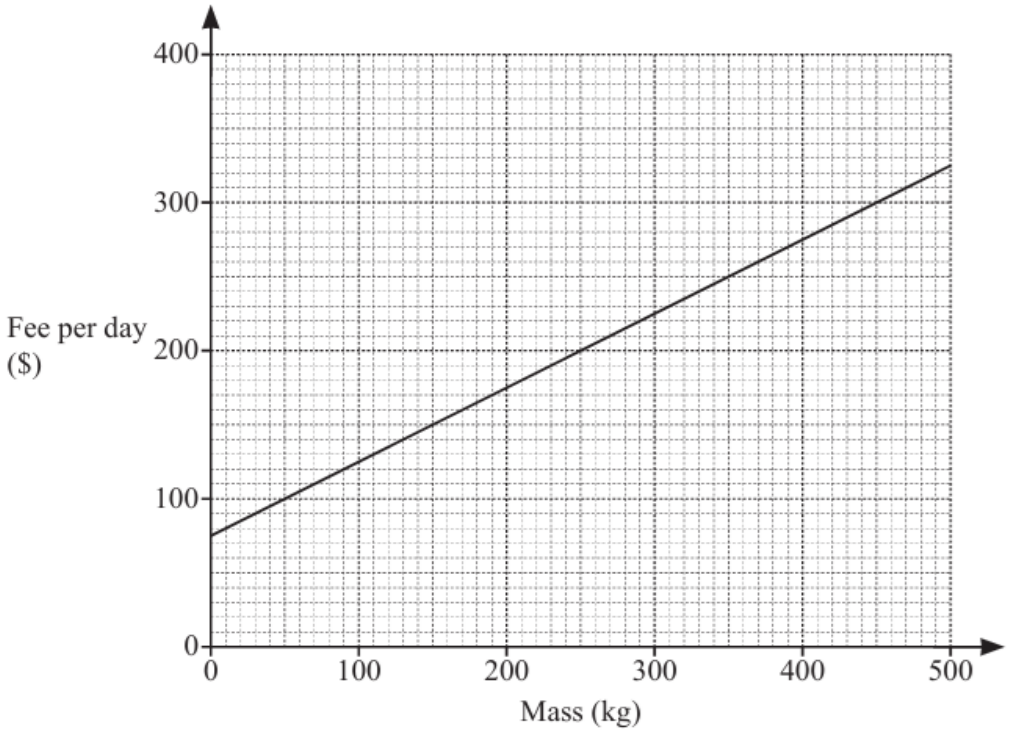
Questions (1)

1 **(a)** Oranges cost \$1.45 per kilogram.
Asher buys 1.2 kg of oranges.

Find the change he receives from \$10.

\$ ..... [1]

(b) Maria pays a fee to sell strawberries at a market.
Each day she pays \$75 plus a payment for the mass of strawberries she sells.
The fee Maria pays per day is shown on the graph.



(i) One day Maria's fee is \$240.

Use the graph to find the mass of strawberries she sells that day.

..... kg [1]

(ii) On Saturday Maria sells 270 kg of strawberries.
On Sunday she sells 220 kg of strawberries.

Find the **total** fee she pays for these two days.

\$ ..... [2]

(iii) The fee per day for Maria now increases.
Each day she now pays \$90 plus a payment of \$60 for every 100 kg of strawberries she sells.

On the grid, draw a line to represent this new fee when she sells 0 kg to 500 kg of strawberries in a day.

[2]

(c) Write the ratio 1.6 kg : 600 g : 2.4 kg in its simplest form.

..... : ..... : ..... [2]

Solution:

(a) orange cost per kg = \$1.45

cost of 1.2kg of orange = 1.45 × 1.2
= 1.74

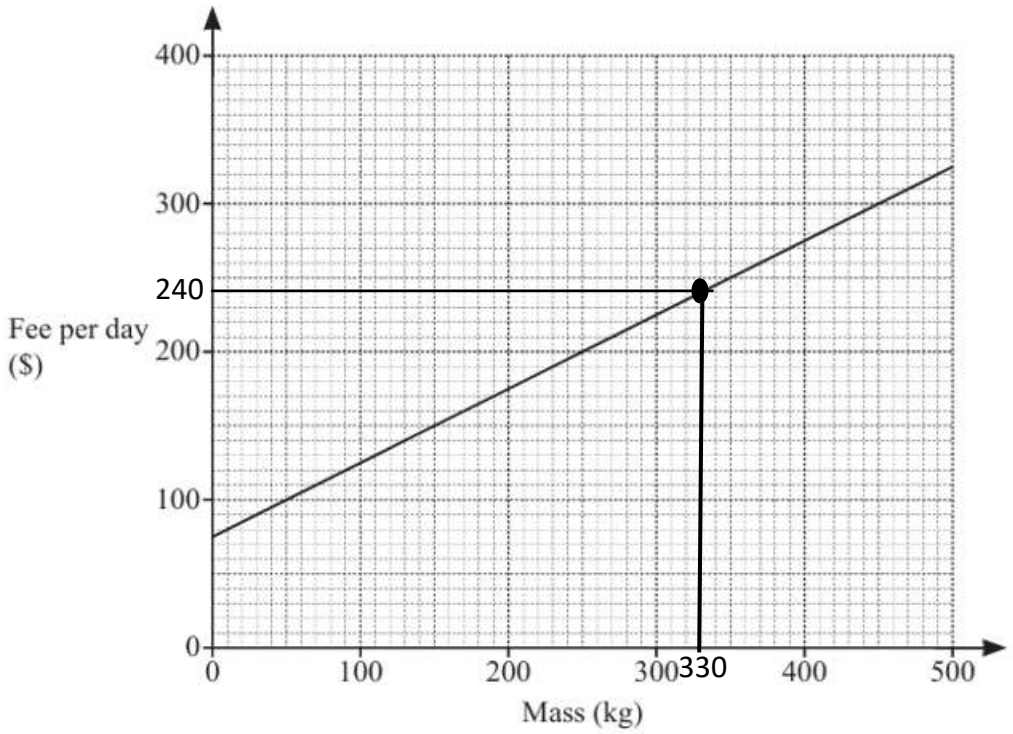
Change received from \$10

= 10 − 1.74
= \$8.26

(b) (i)

First find $240 on vertical axes (Fee per day)

Then draw a horizontal line that cut the graph as shown below. From point of intersection drow the vertical line that cut the x-axis (mass kg) at 330kg.



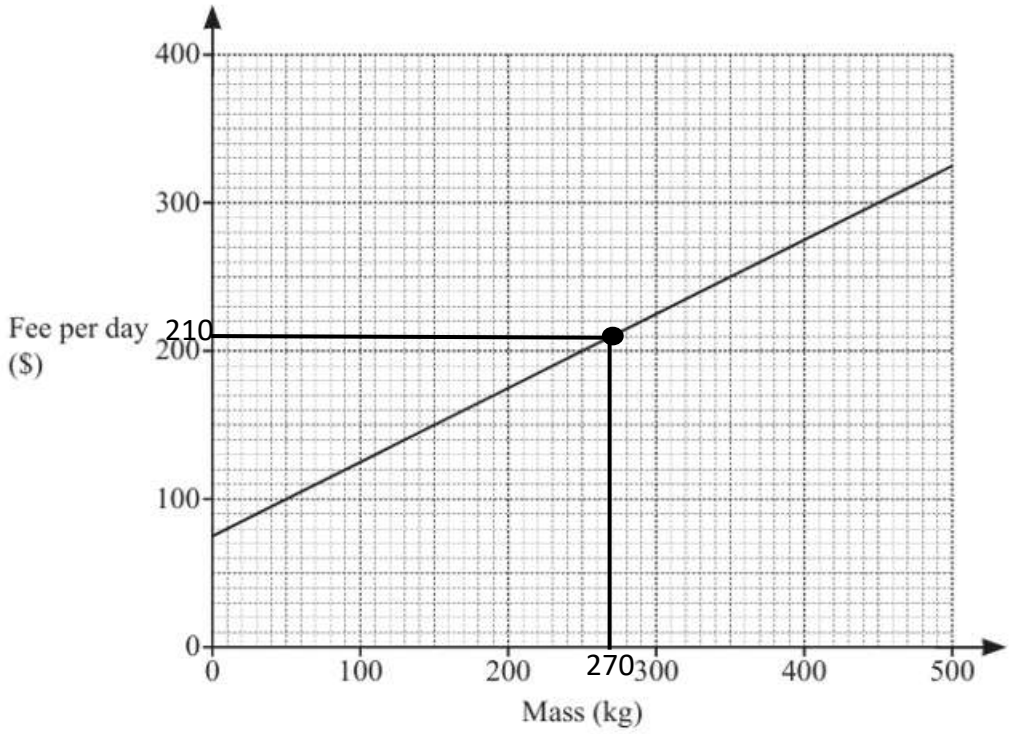
(ii) locate 270 kg on mass (kg) axis and draw a vertical line that cut the graph at a point. From this point draw a graph towards axis (Fee per day) that cut the axis at $210.

Similarly for sunday fee is $185

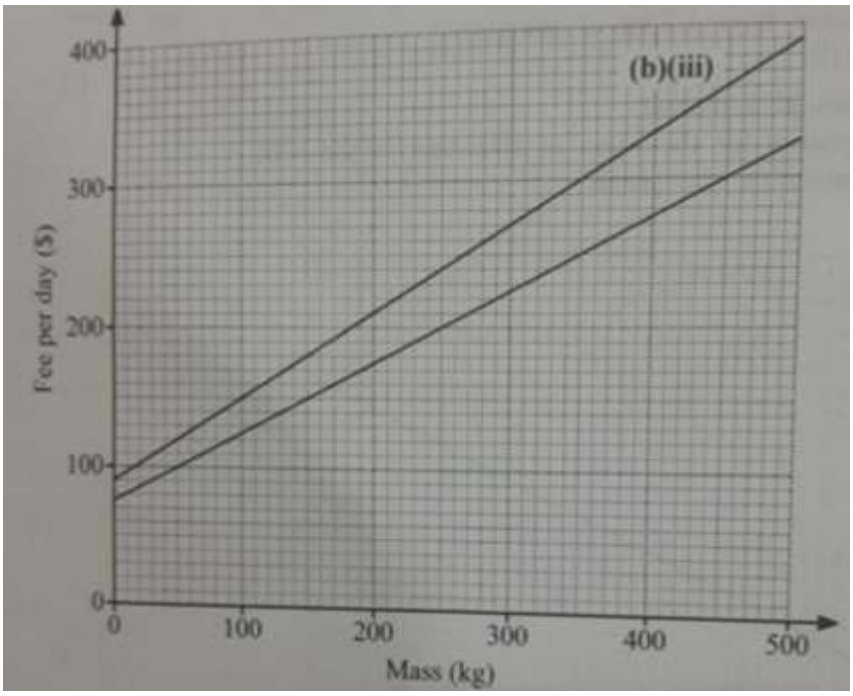
∴ total fee is

$= \$210 + \$185$

$= \$395$



(iii) on the graph on vertical axis (Fee per day) we shall start graph from $90 and draw it upto 500 kg as given in statement. check the graph below.



(graph starts from (0, 90) and subsequent points increased by $60 for every 100 kg)

(c)

1.6 kg : 600 g : 2.4 kg

1600 g : 600 g : 2400 g. ÷ 1kg = 1000

16 g : 6 g : 24 g ÷ 100 common

8 : 3 : 12 ÷ 2 common