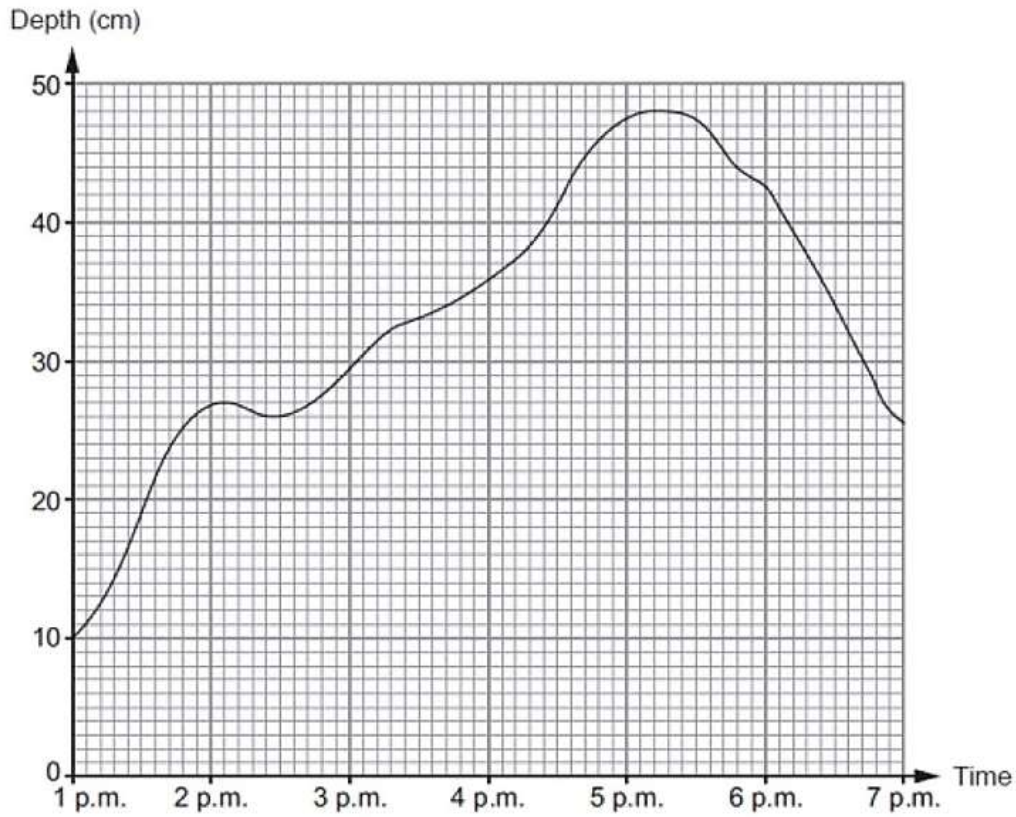


Carys has to write a report on the water levels of the River Tad.
 She has recorded the depth of the water in the River Tad between 1 p.m. and 7 p.m.
 This is shown in her graph below.



(a) What was the greatest recorded depth of water in the river?
 Circle your answer. [1]

- 26 cm 27 cm 46 cm 48 cm 50 cm

(b) In which of these 15-minute periods was the depth of water increasing most rapidly?
 Circle your answer. [1]

- 1:15 p.m. to 1:30 p.m. 4:15 p.m. to 4:30 p.m. 5:00 p.m. to 5:15 p.m.
 6:00 p.m. to 6:15 p.m. 6:15 p.m. to 6:30 p.m.

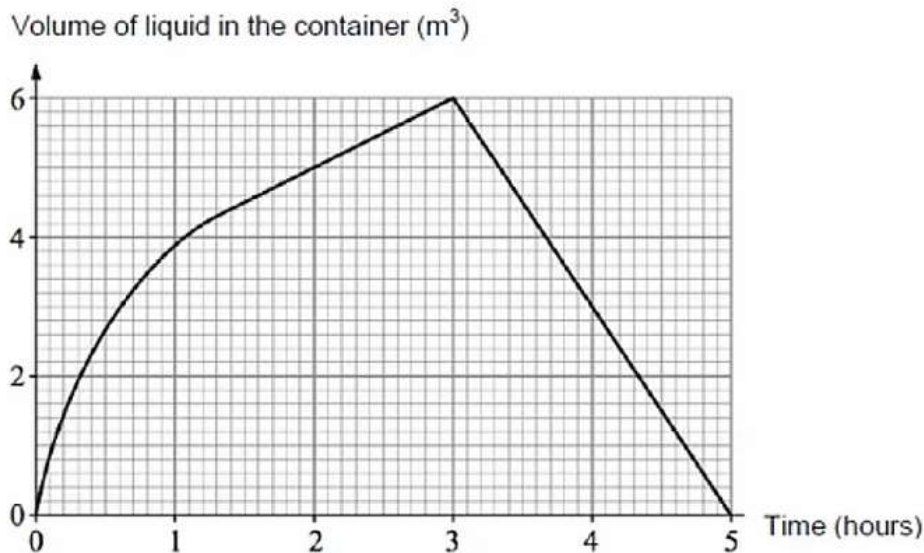
(c) Carys looks at the part of the graph for the period 6 p.m. to 7 p.m.
 Describe what this tells her about the river. [1]

(d) For what period of time was the depth of water in the river greater than 45 cm?
 Circle your answer. [1]

- 48 minutes 1 hour 1 hour 12 minutes
 1 hour 24 minutes 1 hour 30 minutes

A container is used to collect the liquid produced by a factory.
As soon as the container is full, it starts to empty the liquid into a tanker.
As soon as the container is empty, it starts to fill again.

The graph shows the process of the container being filled and emptied into the tanker.



(a) What is the volume of the liquid in the container $2\frac{1}{2}$ hours into the process?

..... m³

[1]

(b) How long does it take to half fill the container?
Give your answer in minutes.

[2]

(c) The container is empty at 8:36 a.m.
At what other times is the container empty between 9 a.m. and 9 p.m.?

[2]

(d) Put a tick in the box next to the correct statement.

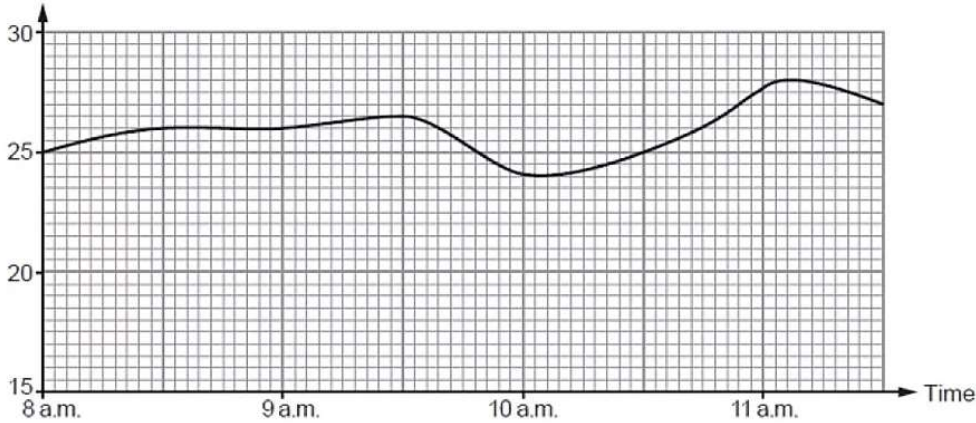
[1]

The container fills at a constant rate from when it is empty to when it is full.	<input type="checkbox"/>
The container fills at a constant rate to start with, then slows down.	<input type="checkbox"/>
After starting to fill, the rate at which the container fills up increases.	<input type="checkbox"/>
The container starts to fill quickly, then slows down to a constant rate.	<input type="checkbox"/>
It is not possible to tell whether or not the rate at which the tank fills up remains the same.	<input type="checkbox"/>

Intermediate Numeracy Summer 2019 P2 Q5b

(b) Jamil works at the *Hafan Parc* swimming pool. He records the temperature of the water in the pool from 8 a.m. to 11:30 a.m. Jamil draws the following graph.

Temperature of the water ($^{\circ}\text{C}$)



Use the graph to answer the following questions about the temperature of the water between 8 a.m. and 11:30 a.m.

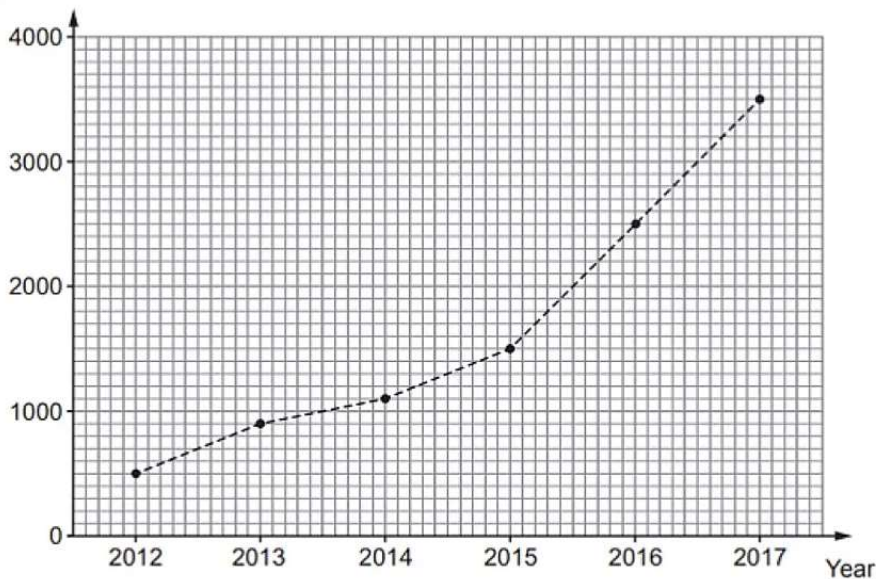
- (i) What is the range of the temperature of the water? [1]

- (ii) For swimming, the most suitable temperature of the water in the pool is between 27°C and 28°C inclusive. Find the length of time that the water in the pool was most suitable for swimming. Give your answer in minutes. [1]

Intermediate Numeracy Nov 2018 P2 Q7abc

Tube Cycles makes a large number of bikes each day. The graph shows the number of bikes made on 1st July each year from 2012 to 2017.

Number of bikes



(a) How many bikes were made on 1st July 2014? [1]
Circle your answer.

1010 1020 1050 1100 1200

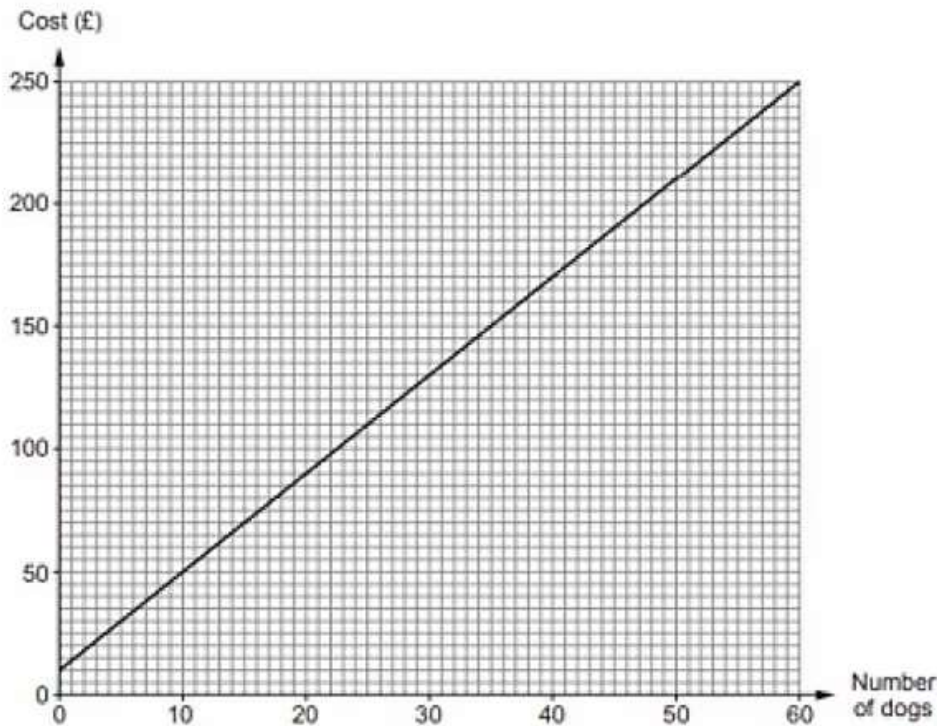
(b) From the graph, is it possible to say how many bikes were made on 1st December 2014? [1]
You must give a reason for your answer.

(c) Complete the statement below. [1]

'On 1st July 2017, there were times as many bikes made than on 1st July 2012.'

Intermediate Numeracy Nov 2017 P1 Q9

William owns and runs dog kennels.
His costs depend on the number of dogs in the kennels.
The running costs for one day are shown on the graph below.



(a) Why does the graph not pass through (0, 0)? [1]

(b) What is the increase in the daily running costs for each additional dog that is kept in the kennels? [2]

(c) (i) Freda also runs a dog kennels.
The cost of keeping 20 dogs in her kennels for one day is £130.
She knows that as the number of dogs increases, the overall cost increases at the same rate as in William's kennels.
Display this information on the graph paper opposite. [2]

(ii) Find the cost of keeping 30 dogs for one day in Freda's kennels. [1]

£