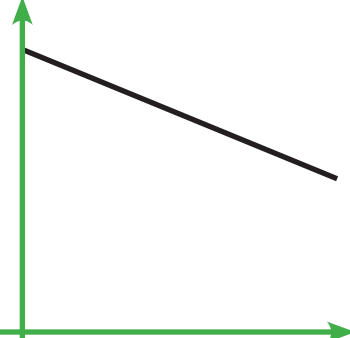
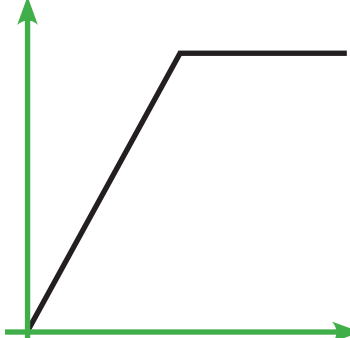
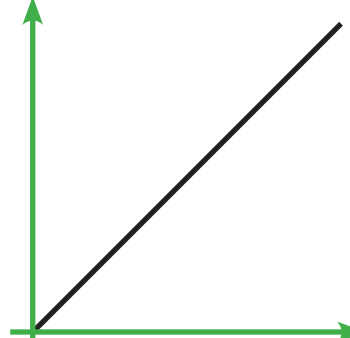
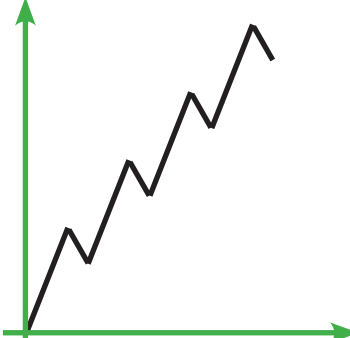
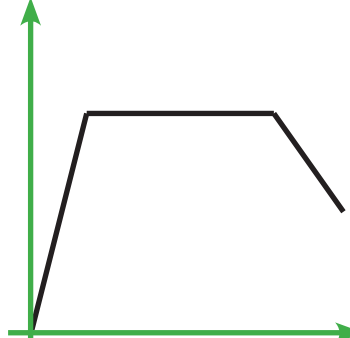
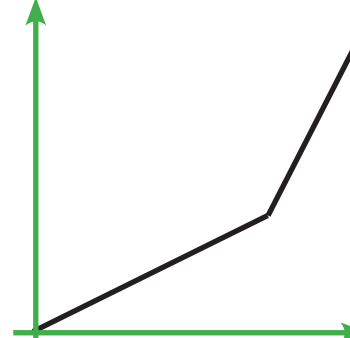


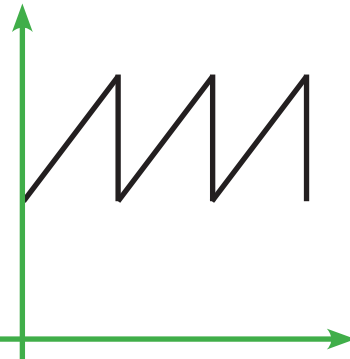
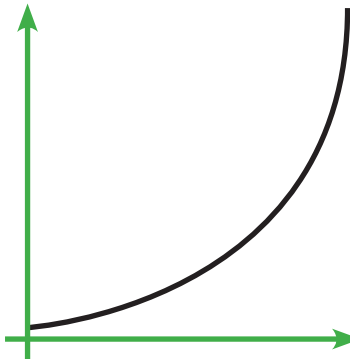
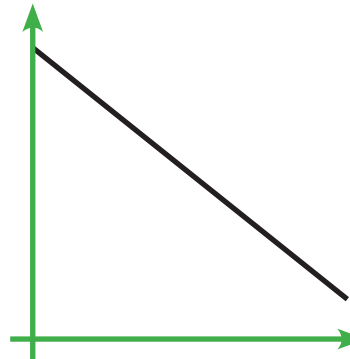
Situation report

Copy and cut up to make packs of cards

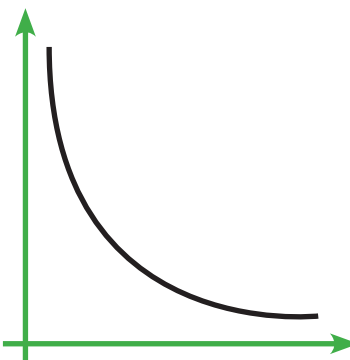
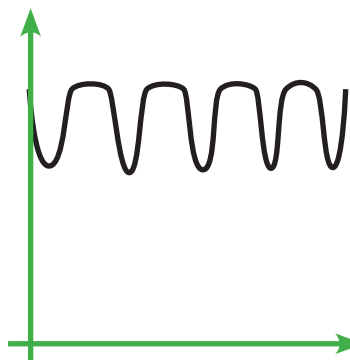
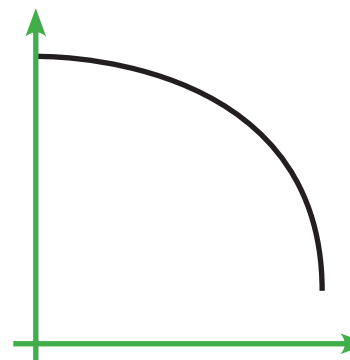
<p>Every hour, each Alien has doubled its mass and then exploded into two.</p>	<p>In the first hour, a green fog spread rapidly around each ship. It stayed there all day but at dusk it started to disappear.</p>	<p>Some Aliens seem to move forward 10 paces then back 3 paces.</p>
		
<p>As time has passed, the Aliens' grey skin has steadily become covered in strange brown spots.</p>	<p>The number of Aliens has doubled every hour.</p>	<p>The flag on the Old Town Hall has been lowered to half-mast because so many people have died.</p>
		

Situation report (continued)

Copy and cut up to make packs of cards

<p>The more people there are in a group, the less interest the Aliens seem to take.</p>	<p>Each tentacle grew steadily until it was 3 metres long.</p>	<p>I watched an Alien move at a steady speed on the level ground but it speeded up when it went downhill.</p>
		

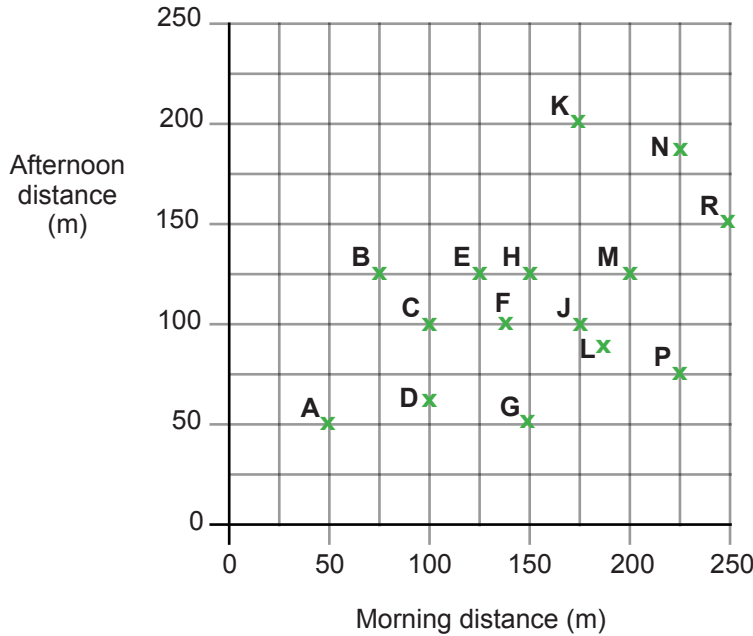
Extension cards

<p>The bus from the Car Park to the Imperial Hotel kept a steady speed but slowed down for corners in case it met Aliens.</p>	<p>The light is fading more quickly now. Soon it will be dark.</p>	<p>We shared the food equally among us. The more of us that shared the food, the less we had to eat.</p>
		



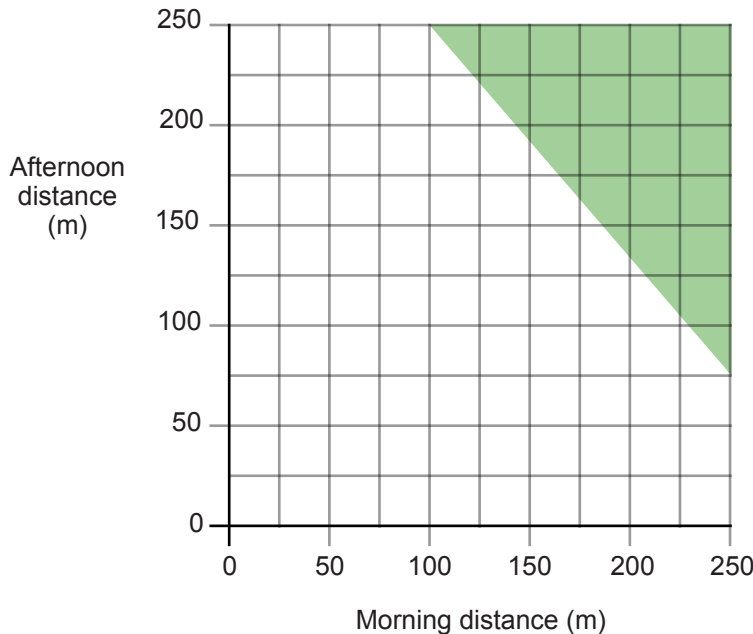
Supplementary problem 3

The scatter graph shows how far 15 Aliens have travelled from their space ships.



To find the total distance travelled by an Alien, add the morning distance to the afternoon distance.

- Which Alien has travelled furthest?
- One teacher says:
'Aliens in the shaded region on the graph have become very dangerous.'



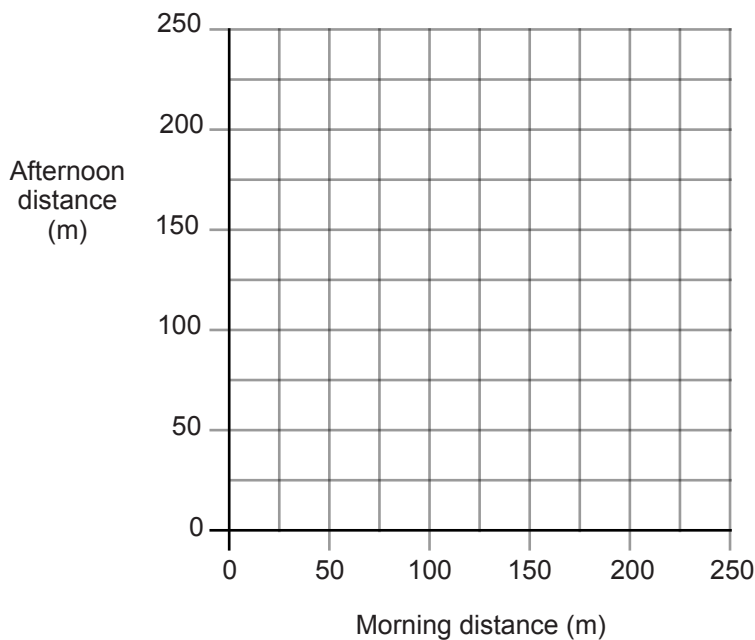
What is the least total distance that an Alien travels to become very dangerous?

Supplementary problem 3 (continued)

3 Another teacher thinks differently. This teacher says:

‘Aliens become very dangerous when the morning distance is 125 metres or more, and the afternoon distance is 125 or more, and the total distance is 325 metres or more.’

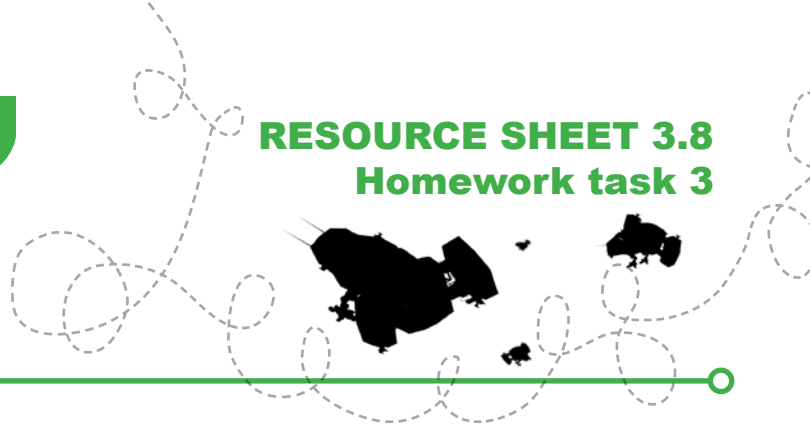
On the graph below, shade the region that shows when Aliens become very dangerous.



4 A third teacher says:

‘In general, the Aliens travelled further in the morning than in the afternoon. They must be getting tired.’

Do you agree with the teacher?
 Explain your answer.



Homework task 3

Task A

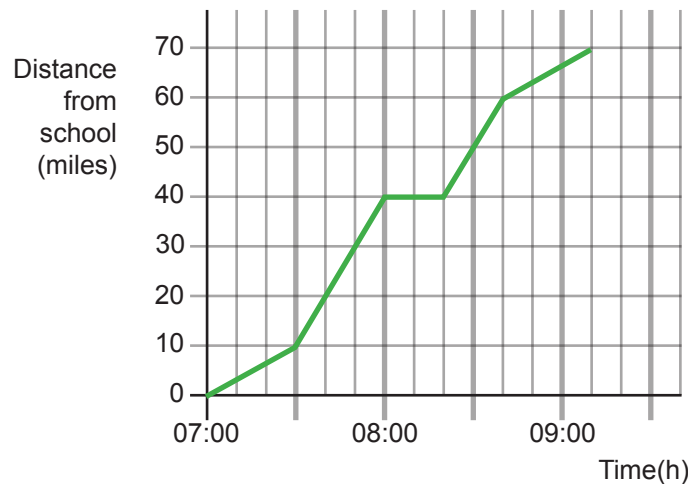
1 Sketch a graph to represent this story. Remember to label the axes.

The spaceships came down rapidly through the atmosphere until they were over Manford City.

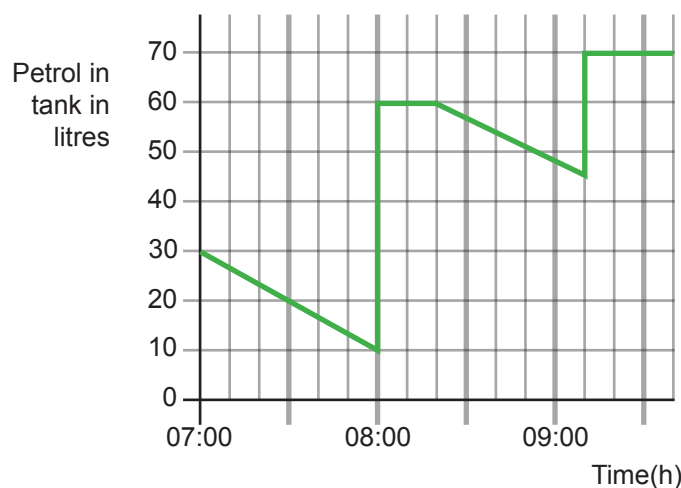
They hovered overhead for several minutes before descending slowly to the ground.

Task B

2 This graph of the bus journey from school to Manford Car Park shows the distance travelled.



This graph of the same journey shows the amount of fuel in the petrol tank of the bus.



- What time was it when the bus reached the Car Park in Manford?
- Between what times did the bus have less than 20 litres of fuel in its tank?
- The driver bought petrol at the Motorway Service Station and the Car Park Garage. At which of these did he buy more fuel?
- Estimate the total amount of petrol that the bus driver bought.
- How much petrol did the bus use over the entire journey?