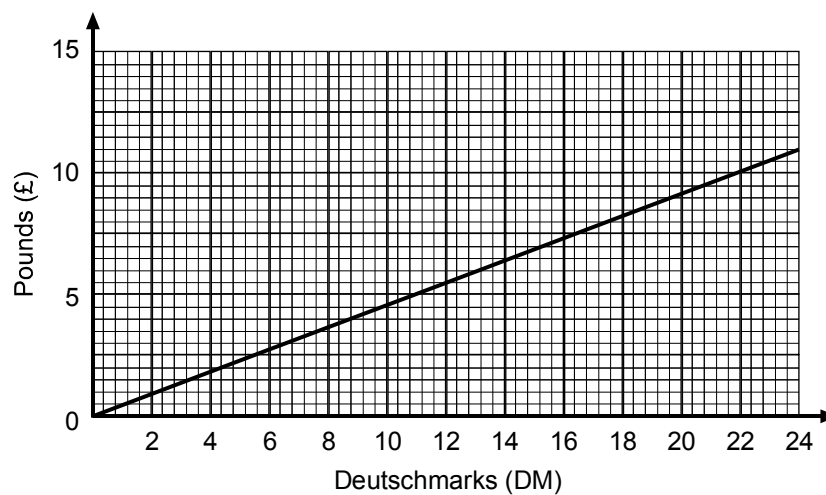


Graphs GCSE Foundation Questions

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**Question 1**

The diagram shows a conversion graph between Pounds (£) and German Deutschmarks (DM)



Use the graph to write down how many

- i) Deutschmarks can be exchanged for £10,
- ii) Pounds can be exchanged for 14 Deutschmarks.

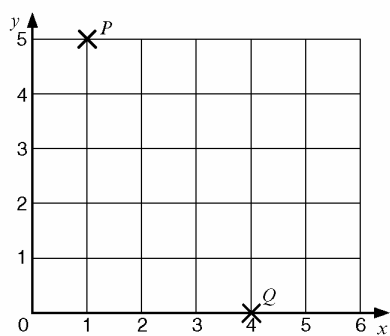
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**Question 2**

(a) Write down the co-ordinates of the points

i)  $P$

ii)  $Q$



(b) On the co-ordinate grid mark and label the points

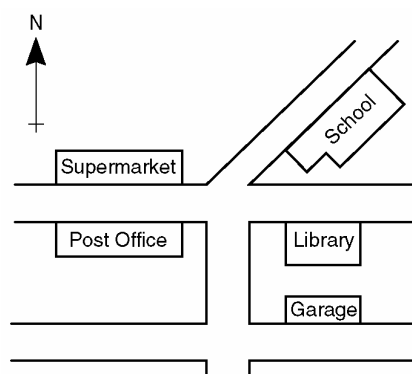
i)  $G$  with co-ordinates  $(0, 3)$

ii)  $H$  with co-ordinates  $(5, 4)$

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**Question 3**

The diagram shows the positions of some places in a village.

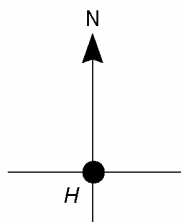


- (a) Which place is South of the Library?
- (b) Write down the compass direction of
- the Library from the Post Office,
  - the Post Office from the School,
  - the Garage from the Supermarket.

---

**Question 4**

Helen is standing at  $H$ . She is facing North.



She turns anticlockwise through 1 right angle.

**(a)** In what direction is she now facing?

Later Harry stands at  $H$ . He faces South.  
He turns clockwise through  $1\frac{1}{2}$  right angles.

**(b)** In what direction will he then be facing?

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**Question 5**

The positions of some large towns are shown by dots on this map.

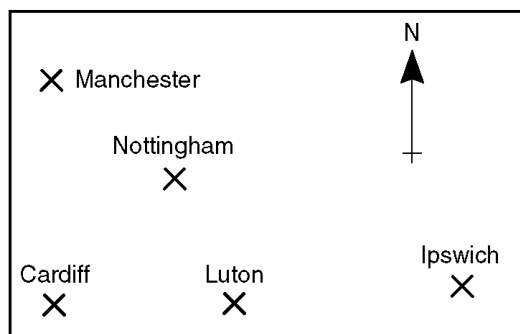


- (a) Write down the name of the town that is
- West of London,
  - due South of Newcastle.
- (b) Write down the compass bearing of
- London from Bristol,
  - Birmingham from London.

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**Question 6**

The diagram is part of a map showing the positions of several towns.

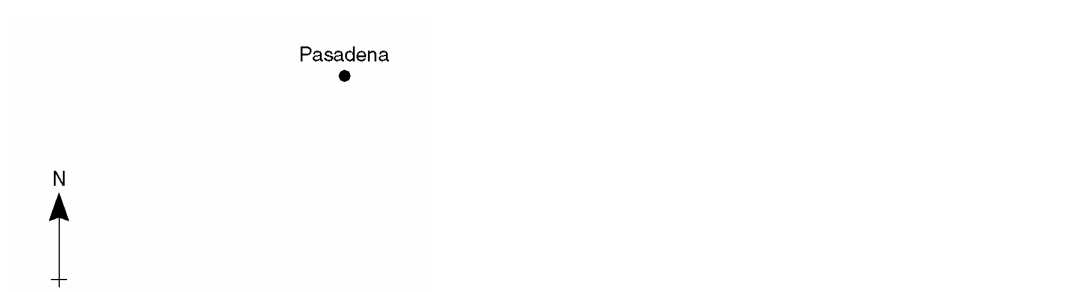


- (a) Which town is due West of Luton?
- (b) Write down the approximate compass direction of Nottingham from Cardiff.
- (c) Measure and write down the bearing of Manchester from Nottingham.

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**Question 7**

San Fernando is on a bearing of  $157^\circ$  from Pasadena.



Draw this bearing accurately on the diagram above.

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**Question 8**

The scale drawing below shows the positions of an airport tower,  $T$ , and a radio mast,  $M$ .

1 cm on the diagram represents 20 km.



- (a)
  - i) Measure, in centimetres, the distance  $TM$ .
  - ii) Work out the distance in km of the airport tower from the radio mast.
- (b)
  - i) Measure and write down the bearing of the airport tower from the radio mast.
  - ii) Write down the bearing of the radio mast from the airport tower.

A plane is 80 km from the radio mast on a bearing of  $220^\circ$ .

- (c) Plot the position of the plane, using a scale of 1 cm to 20 km on the scale diagram.



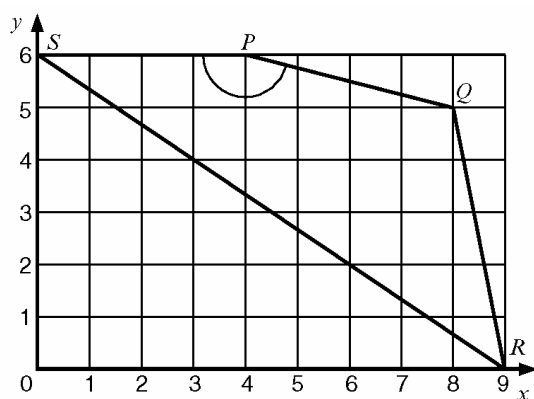
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**Question 9**

**(a)** Write down the co-ordinates of the points

i)  $P$

ii)  $R$ .



**(b)** On the co-ordinate grid above, plot the following points

$T(1, 2)$ ,  $V(4, 1)$

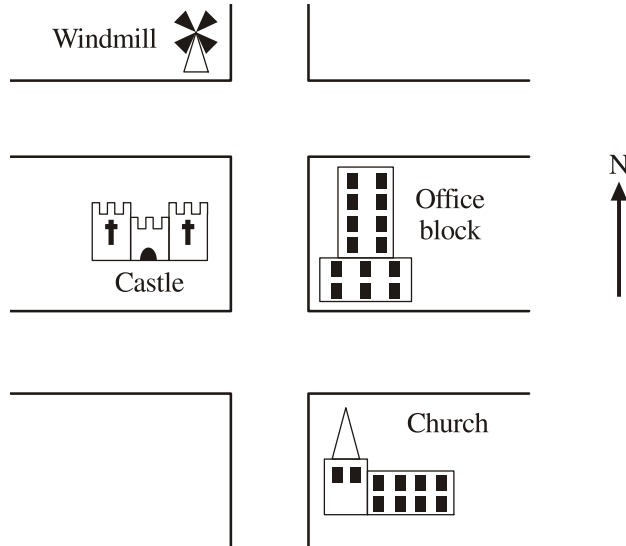
**(c)** Using your ruler, find the perimeter, in centimetres, of the quadrilateral  $PQRS$ .

**(d)** Measure and write down the size of angle  $P$ .

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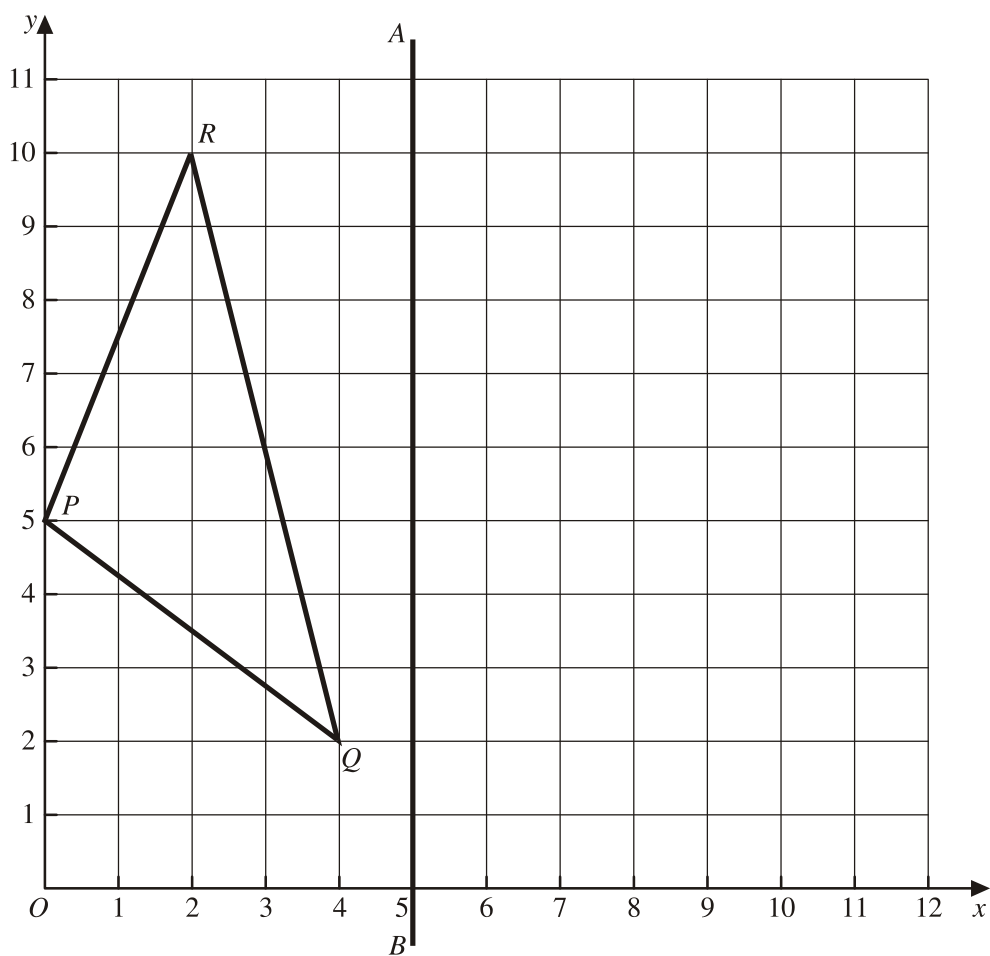
**Question 10**

Here is a plan of a town. Some buildings are shown on it.



- (a) Write down the compass bearing of the Office block from the Castle. **(1 mark)**
- (b) Write down the compass bearing of the Windmill from the Office block. **(1 mark)**
- (c) Write down the compass bearing of the Church from the Castle. **(1 mark)**

**Question 11**



**(a)** Write down the coordinates of the points

i)  $P$

ii)  $Q$

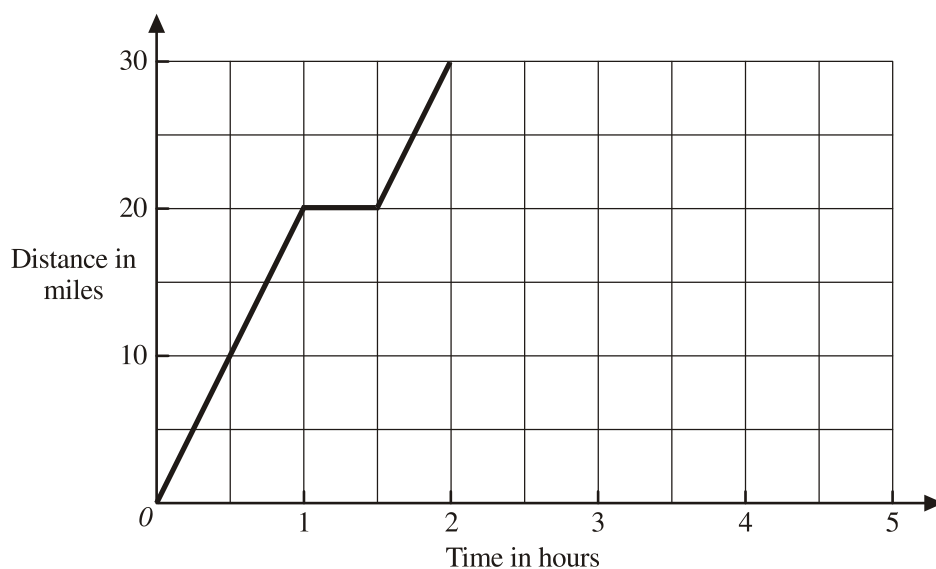
**(2 marks)**

**(b)** On the grid above, draw the reflection of triangle  $PQR$  in the line  $AB$ .

**(2 marks)**

**Question 12**

Mark drives 30 miles to his friend's house.  
The travel graph shows Mark's journey.

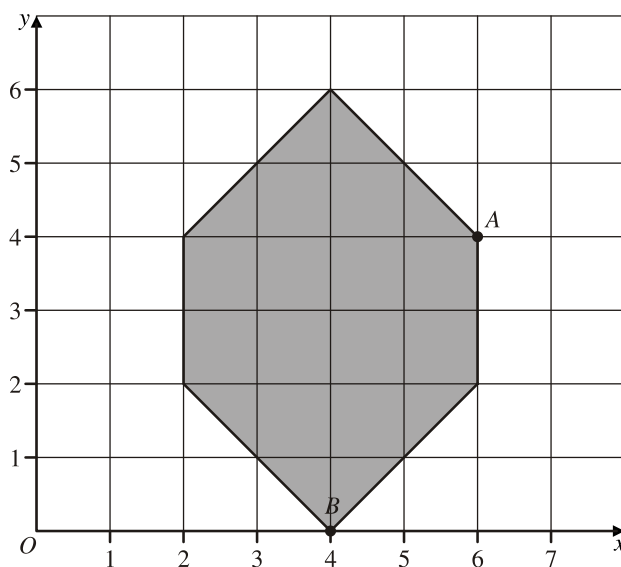


- (a)** How long does the journey take? **(1 mark)**

Mark stays with his friend for one hour, He then travels home at 30 miles per hour.

- (b)** Complete the graph to show this information. **(3 marks)**

**Question 13**



**(a)** Write down the coordinates of the point

**(i)**  $A$ ,

**(ii)**  $B$ .

**(2 marks)**

**(b)** Work out the area, in square centimetres, of the shaded shape.

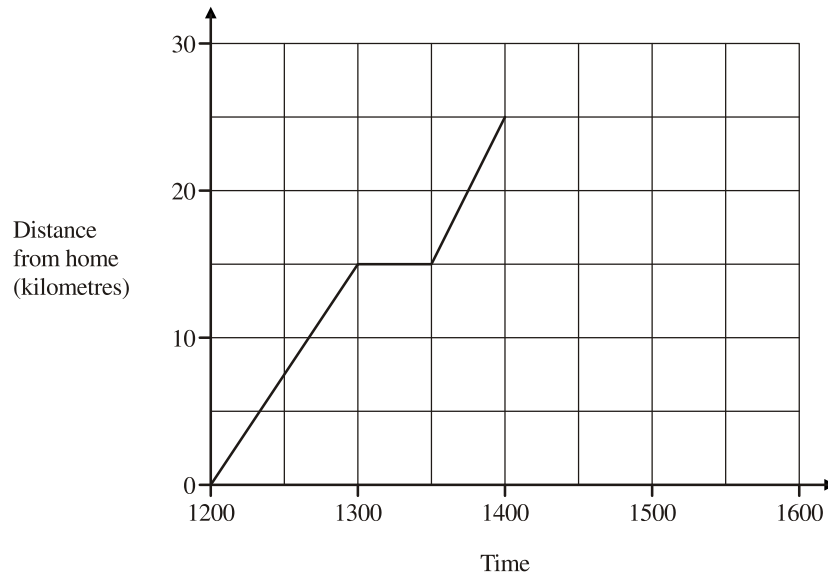
.....  $\text{cm}^2$   
**(1 mark)**

**(c)** Measure the perimeter, in centimetres, of the shaded shape.

.....  $\text{cm}$   
**(2 marks)**

**Question 14**

Elizabeth went for a cycle ride.  
The distance-time graph shows her ride.



She set off from home at 1200 and had a flat tyre at 1400.  
During her ride, she stopped for a rest.

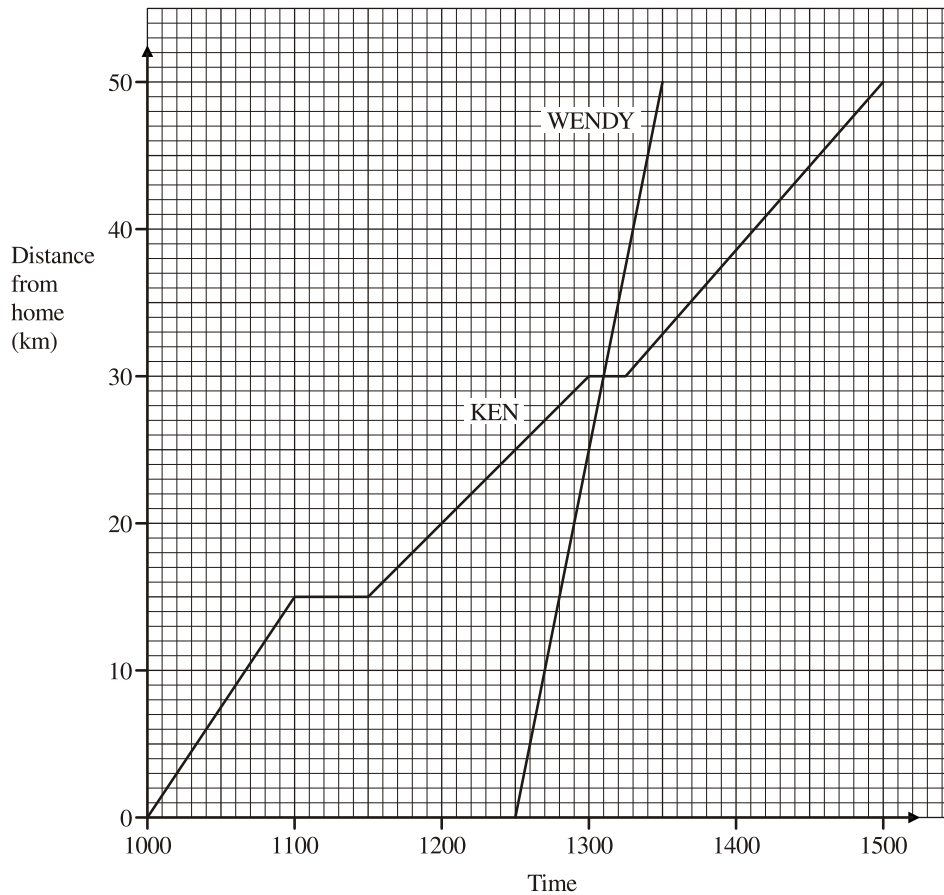
- (a) (i) At what time did she stop for a rest?  
(ii) At what speed did she travel after her rest?

..... kilometres per hour  
**(3 marks)**

It took Elizabeth 15 minutes to repair the flat tyre.  
She then cycled home at 25 kilometres per hour.

- (b) Complete the distance-time graph to show this information. **(3 marks)**

**Question 15**



Ken and Wendy go from home to their caravan site.  
 The caravan site is 50 km from their home.  
 Ken goes on his bike. Wendy drives in her car.  
 The diagram shows information about the journeys they made.

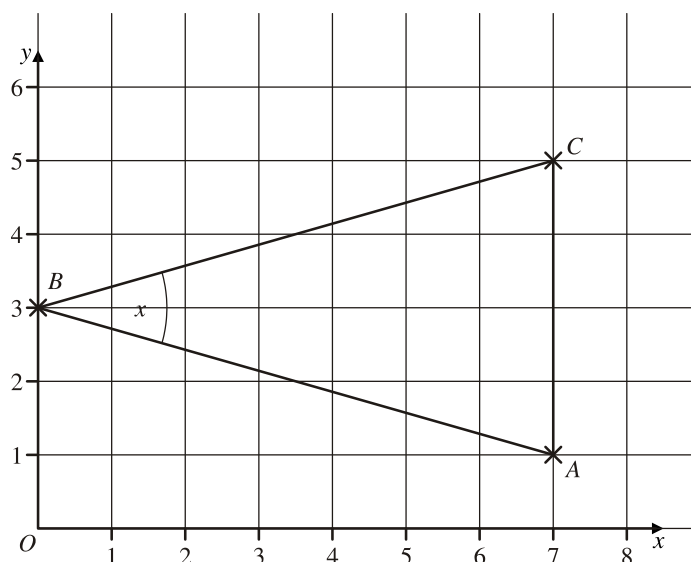
- (a) At what time did Ken first stop? **(1 mark)**
- (b) How far was Ken from the caravan site at 1430? **(1 mark)**
- (c) At what time did Wendy pass Ken? **(1 mark)**
- (d) Between which two times was Ken cycling at his greatest speed?  
 ..... to .....  
**(1 mark)**
- (e) Work out Wendy's average speed for her journey.  
 ..... km/h  
**(1 mark)**





### Question 16

The diagram shows a triangle  $ABC$  on a centimetre grid.



(a) Write down the coordinates of the point

- (i)  $A$ , (....., .....)  
 (ii)  $B$ . (....., .....)  
**(2 marks)**

(b) Write down the special name for triangle  $ABC$ . **(1 mark)**

(c) Work out the area of the triangle  $ABC$ .  
 .....  $\text{cm}^2$   
**(1 mark)**

(d) Measure the length of the line  $AB$ .  
 Give your answer in millimetres.  
 ..... mm  
**(1 mark)**

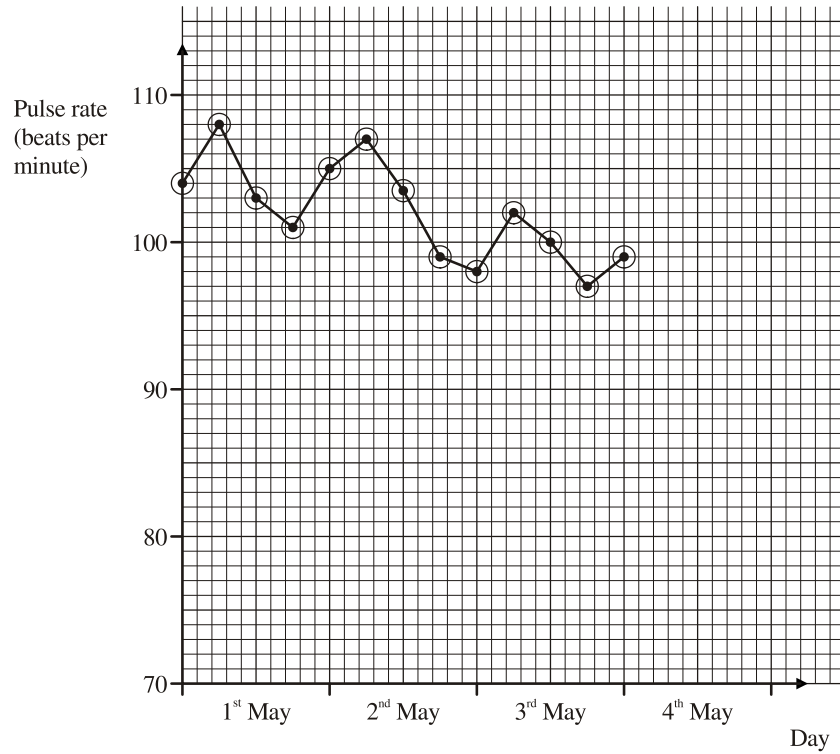
(e) (i) Measure the size of angle  $x$ . ..... $^\circ$   
 (ii) Write down the special name that is given to this type of angle. **(2 marks)**

(f) Draw **one** line of symmetry on the triangle. **(1 mark)**

**Question 17**

Barry's pulse rate is taken every 6 hours over 3 days.

The graph shows his pulse rate in beats per minute.



(a) Write down the first pulse rate shown on the graph.

..... beats per minute.  
(1 mark)

(b) Write down Barry's highest pulse rate shown during the three days.

..... beats per minute.  
(1 mark)

(c) Work out the difference between his highest and lowest pulse rates shown on 3rd May.

..... beats per minute.  
(2 marks)

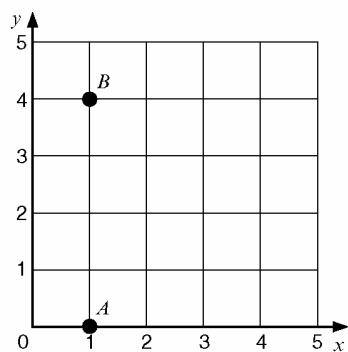
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**Question 18**

**(a)** Write down the co-ordinates of the point

**i)**  $A$

**ii)**  $B$



 = 1 square cm

**(b)** On the grid plot and label the points  $C(3, 4)$  and  $D(3, 2)$ .

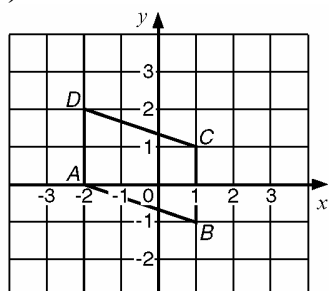
**(c)** Work out the area of the shape  $ABCD$ .

**Question 19**

**(a)** Write down the coordinates of the point

i)  $A$

ii)  $B$



**(b)** Write down the mathematical name of the shape  $ABCD$ .

**(c)** On the grid below enlarge  $ABCD$  by a scale factor of 2.

