

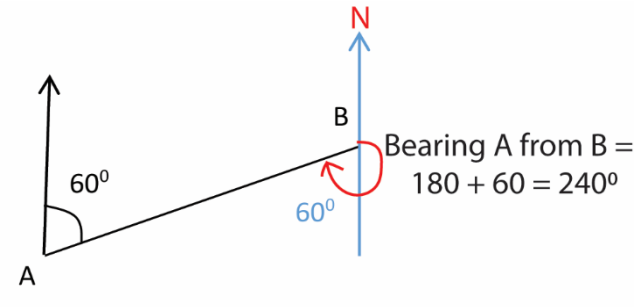
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Bearings

A **bearing** is an angle, measured clockwise from the north direction.

Example

What is the bearing of A from B in the diagram below?

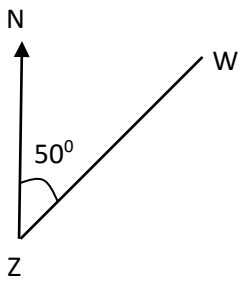


The bearing of A from B = $180^0 + 60^0 = 240^0$

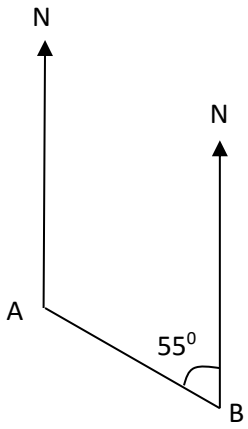
Revision questions

1. A fisherman saw a boat on water on a beating of 060^0. What was the bearing of the fisherman from the boat?
   Let the bearing be X

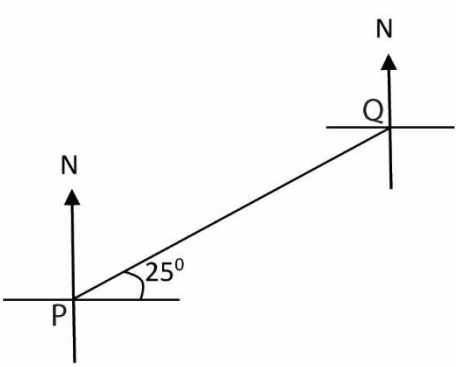
2. In the figure below, find the bearing town **Z** from town **W.**



3. In the figure below, find the bearing of town B from town A.



4. Find the bearing of point P from Q in the diagram below



5. Peter and John walked from the same point 0. Peter walked 50 metres westwards to point P *and* John walked 50 metres southwards to point Q.

(a). Sketch a diagram to show the above information.

(b).Draw an accurate diagram to show the movement of the two boys. Use a scale of 1 cm to represent 10 metres.

(c). Measure the distance between P and Q and give your answer in metres.

6. Mukwana drove 40km southwards from Town P to Town K. He then drove 30 km eastwards to Town Q and returned directly from Q to P.

a) Using a scale of 1 cm to represent 5 km, draw an accurate diagram to show Mukwana's journey.

b) What is the shortest distance from P to Q in kilometres?

7. Byarugaba left village X and drove westwards to village Y, a distance of 30km. He then drove southwards from village Y to village Z, a distance of 24km and returned directly from Z to X.

(a) Using a scale of 1 cm to represent 6km, draw an accurate diagram to show Byarugaba's journey.

(b) Find the shortest distance from X to Z in Kilometres(km)

8. Asimwe is facing North-East. If she turns anti-clockwise to face west, through what angle does she turn?

9. The bearing of town B from town A is 120^0 and town B is 4 km from A. The bearing of town C and B is 60^0 and town C is km 5km from B .
   (a) Draw an accurate diagram showing the three towns.
   (use scale 1 cm =1km) (5 marks)

   (b) Find the shortest distance between town A and C in kilometers (1 mark)

10. A ship left bell for Kyushu on bearing 090^0. It sailed for 120km then changed its course sailed on bearing 130^0 for 90km before reaching Kisumu.

(a). Draw a sketch diagram of the journey (4marks)

(b). Using a scale of 1cm =20km, draw an accurate diagram of the whole journey (4marks)

(c) What is the bearing of Kisumu from Port bell? (1mark)

11. A tourist left town A and traveled 55 km westwards to town B. He then tuned on a bearing of 215^0 and traveled to town C which is a distance of 65km.

    (a) Draw a sketch diagram to show the tourists ` journey. (01 marks)

    (b) Using a scale of 1cm to represent 10km, draw an accurate diagram to show the tourist`s journey. (03 marks)

    (c) Find the shortest distance from town C to A in km. ....cm (01 marks)

12. A plane flew from airport **K** to airport **T** on a bearing of 120^0. The distance between **K** and **T** is 600km. It then left airport **T** for airport **R** on a bearing of 210^0. The distance between **T** and **R** is 500km.

(a) Sketch journey made by the plane (04marks)

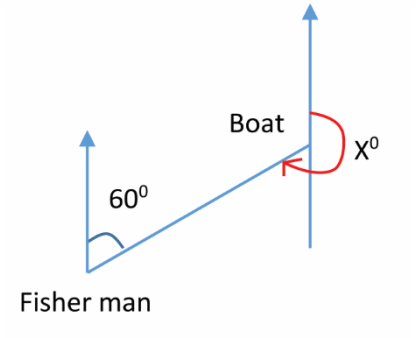
(b) Using scale of 1cm represent 100km draw an accurate diagram to show the journey made by the plane.

(04marks)

(c) Find the bearing airport **R** from airport **K** = ……. (01mark)

Suggested solutions

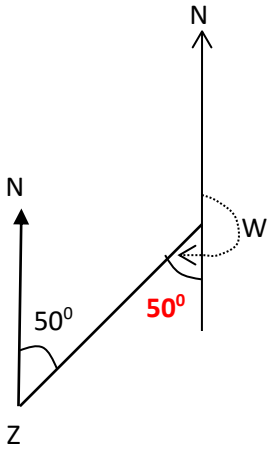
1. A fisherman saw a boat on water on a beating of 060^0. What was the bearing of the fisherman from the boat?
   Let the bearing be X



Bearing of fisherman $= 180^0 + 60^0$

$= 240^0$

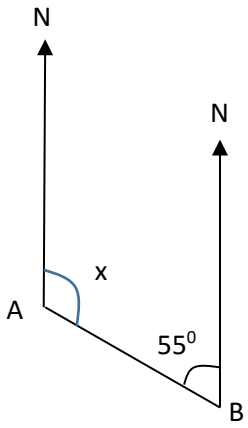
2. In the figure below, find the bearing town **Z** from town **W.**



The bearing of Z from W $= 180^0 + 50^0$

$= 230^0$

3. In the figure below, find the bearing of town B from town A.



Let the bearing be x

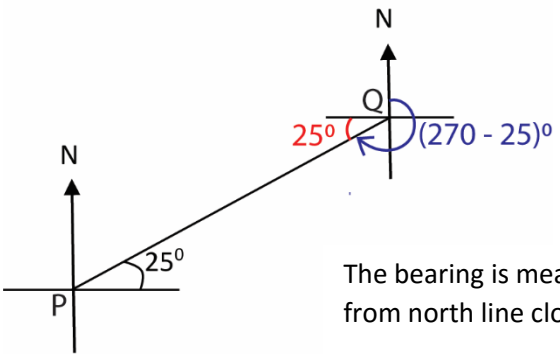
$X + 55^0 = 180^0$

$X = 180^0 - 55^0$

$X = 125^0$

The bearing of B from A = 125^0

4. Find the bearing of point P from Q in the diagram below



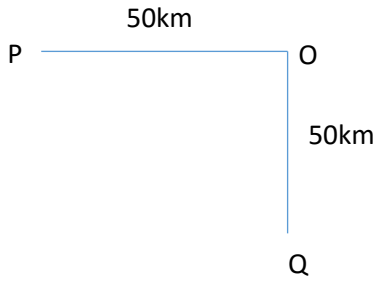
The bearing is measured from north line clockwise

$= 180^0 + 65^0 = 245^0$

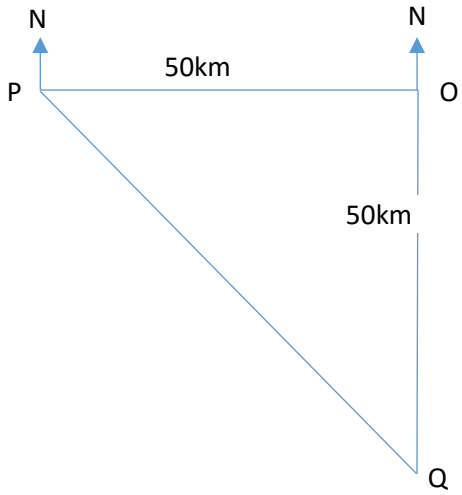
Or $= 270^0 - 25^0 = 245^0$

5. Peter and John walked from the same point 0. Peter walked 50 metres westwards to point P *and* John walked 50 metres southwards to point Q.

(a). Sketch a diagram to show the above information.



(b).Draw an accurate diagram to show the movement of the two boys. Use a scale of 1 cm to represent 10 metres.



(c). Measure the distance between P and Q and give your answer in metres.

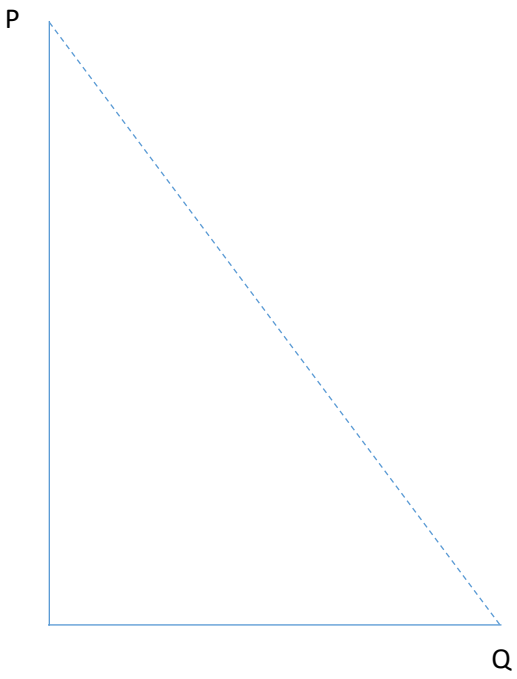
PQ = 7.1 cm

=7.1 x 10m

= 71m

6. Mukwana drove 40km southwards from Town P to Town K. He then drove 30 km eastwards to Town Q and returned directly from Q to P.

a) Using a scale of 1 cm to represent 5 km, draw an accurate diagram to show Mukwana's journey.

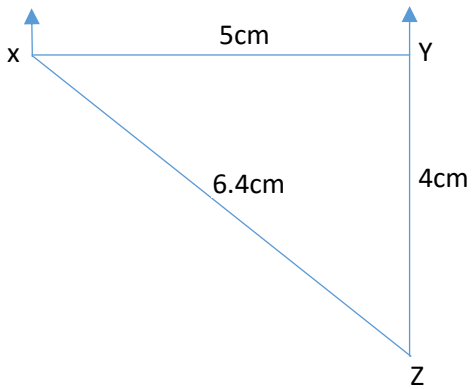


b) What is the shortest distance from P to Q in kilometres?

The shortest distance PQ = 10cm

7. Byarugaba left village X and drove westwards to village Y, a distance of 30km. He then drove southwards from village Y to village Z, a distance of 24km and returned directly from Z to X.

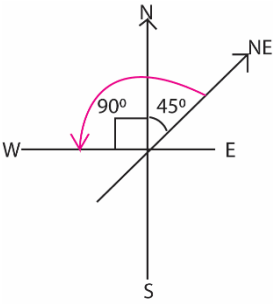
(a) Using a scale of 1 cm to represent 6km, draw an accurate diagram to show Byarugaba's journey.



(b) Find the shortest distance from X to Z in Kilometres(km)

The shortest distance = 6.4 x 6 =38.4km

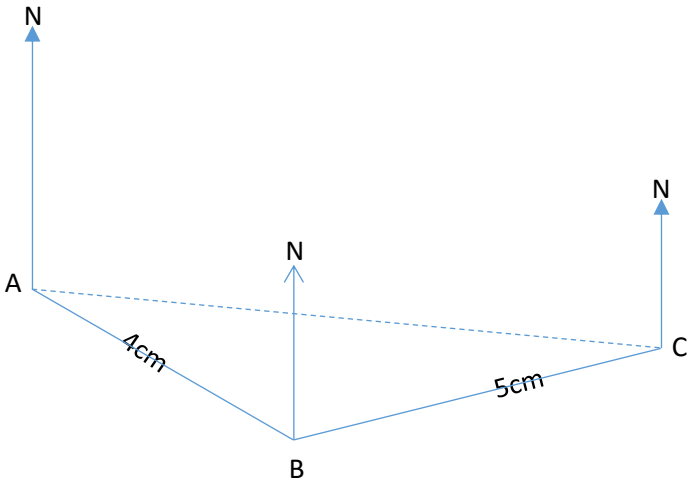
8. Asimwe is facing North-East. If she turns anti-clockwise to face west, through what angle does she turn?



She turns through $90 + 45 = 135^0$.

9. The bearing of town B from town A is 120^0 and town B is 4 km from A. The bearing of town C and B is 60^0 and town C is km 5km from B.

(b) Draw an accurate diagram showing the three towns.
(Use scale 1 cm =1km) (5 marks)



(b) Find the shortest distance between town A and C in kilometers (1 mark)

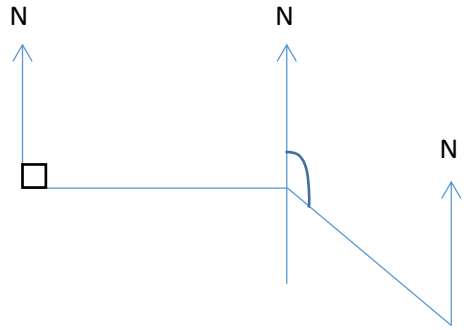
Shortest distance AC = 7.9cm

But 1cm is equivalent 1km

$\therefore$ *the shortest distance* $AC = 7.9km$

10. A ship left bell for Kyushu on bearing 090^0. It sailed for 120km then changed its course sailed on bearing 130^0 for 90km before reaching Kisumu.

(a). Draw a sketch diagram of the journey (4marks)

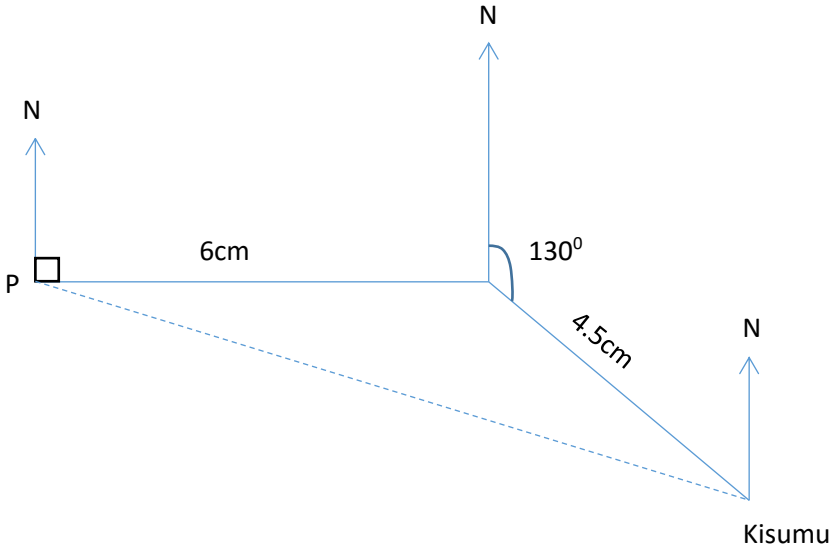


(b). Using a scale of 1cm =20km, draw an accurate diagram of the whole journey (4marks)

Drawing to scale

1cm = 20km

120km = $\frac{120}{20} = 6cm$ 90km = $\frac{90}{20} = 4.5cm$

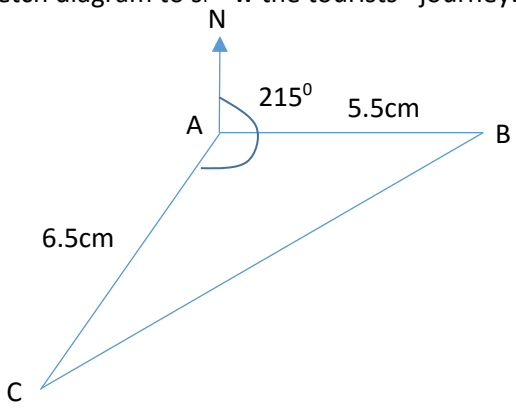


(c) What is the bearing of Kisumu from Port bell. (1mark)

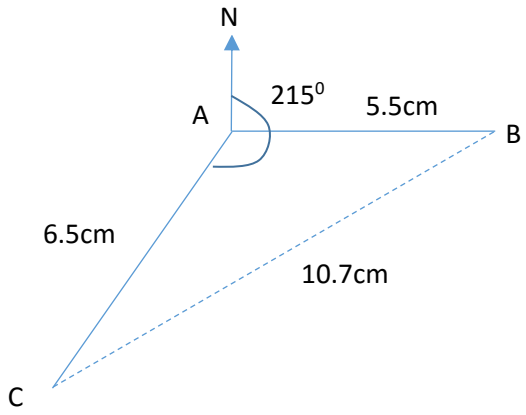
107^0

11. A tourist left town A and traveled 55 km westwards to town B. He then tuned on a bearing of 215^0 and traveled to town C which is a distance of 65km.

(a) Draw a sketch diagram to show the tourists ` journey. (01 marks)



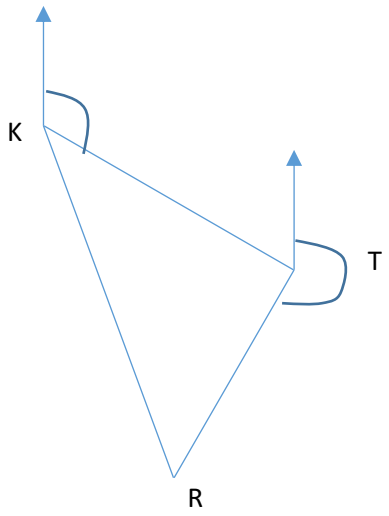
(b) Using a scale of 1cm to represent 10km, draw an accurate diagram to show the tourist`s journey. (03 marks)



(c) Find the shortest distance from town C to A in km. 10.7cm (01 marks)

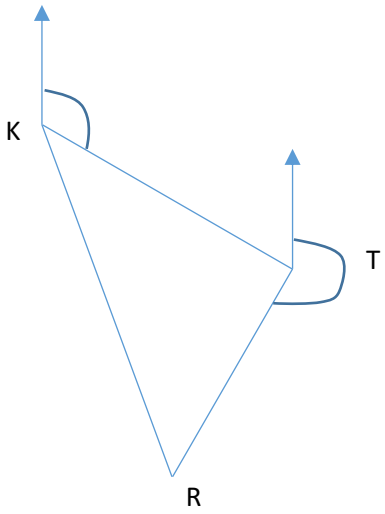
12. A plane flew from airport **K** to airport **T** on a bearing of 120^0. The distance between **K** and **T** is 600km. It then left airport **T** for airport **R** on a bearing of 210^0. The distance between **T** and **R** is 500km.

(a) Sketch journey made by the plane (04marks)



(b) Using scale of 1cm represent 100km draw an accurate diagram to show the journey made by the plane.

(04marks)



(c) Find the bearing airport **R** from airport **K** $= 160^0$ (01mark)

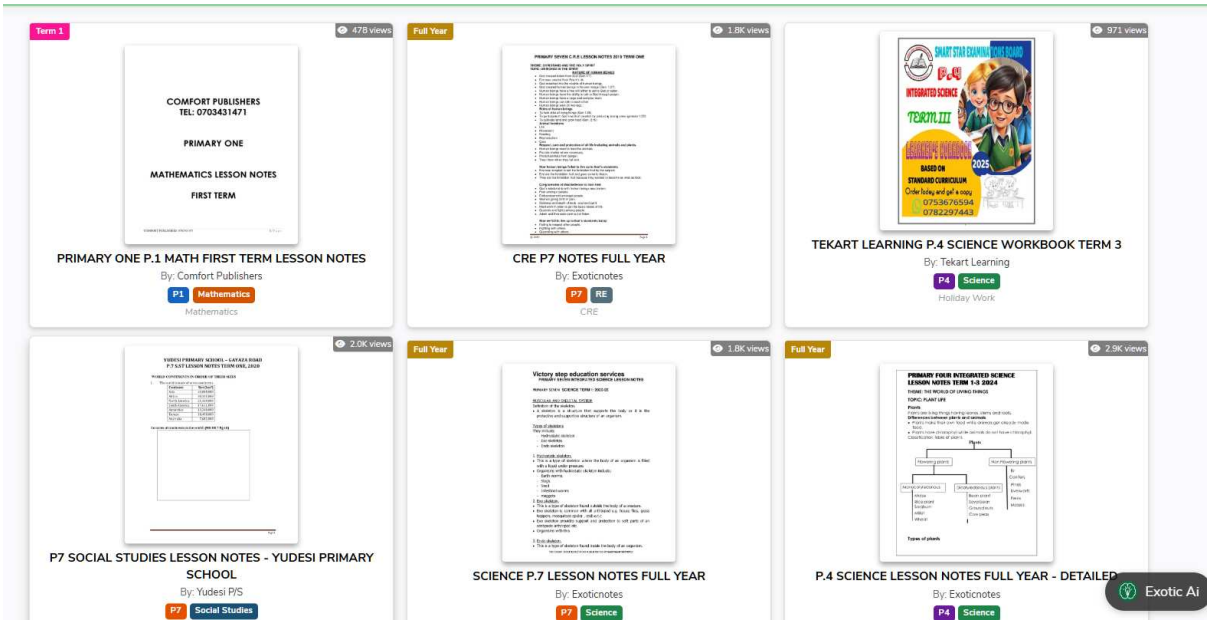
32. A school library is 70 metres east of the main hall. The staff room is 60 metres from the library on a bearing of 240^o.

(a) Using a scale of 1 cm to represent 10 metres, show the three places on an accurate diagram. *(04 marks)*

(b) Find the shortest distance between the main hall and the staff room. *(02 marks)*

Thank you

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