Bearing & Scale Drawing

Bearing

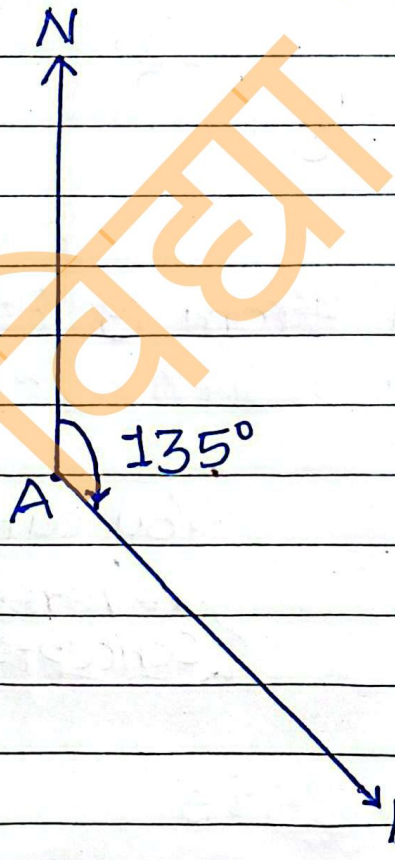
The method of measuring the distance between two places with respect to the line representing north pole in three figures angles in the clockwise direction is called bearing.

Q.1. Draw the bearing of :-

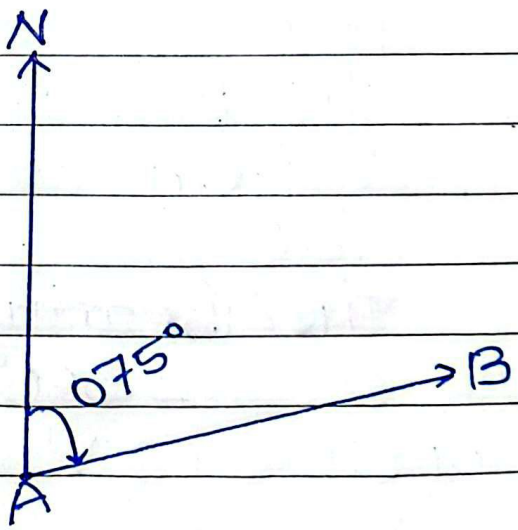
(a) 135°
(b) 075°
(c) 045°
(d) 090°

⇒ Sol^n.

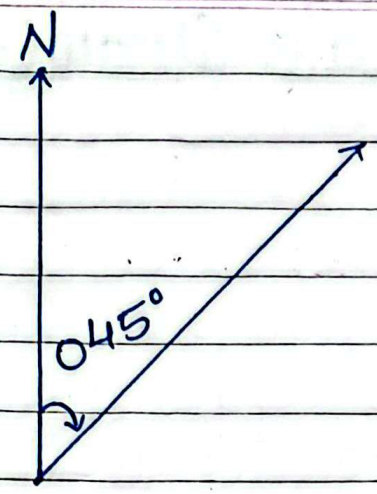
(a)



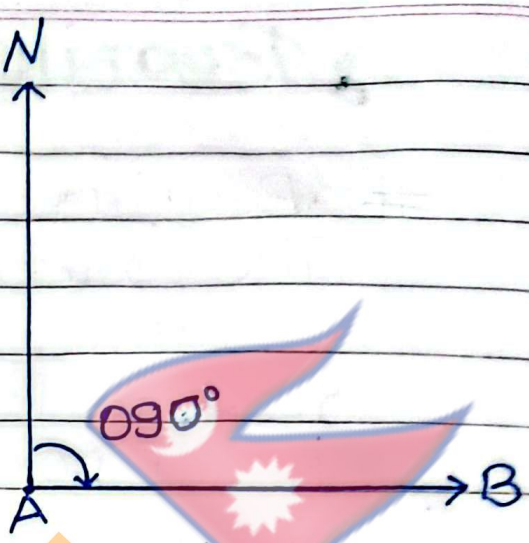
(b)



(c)

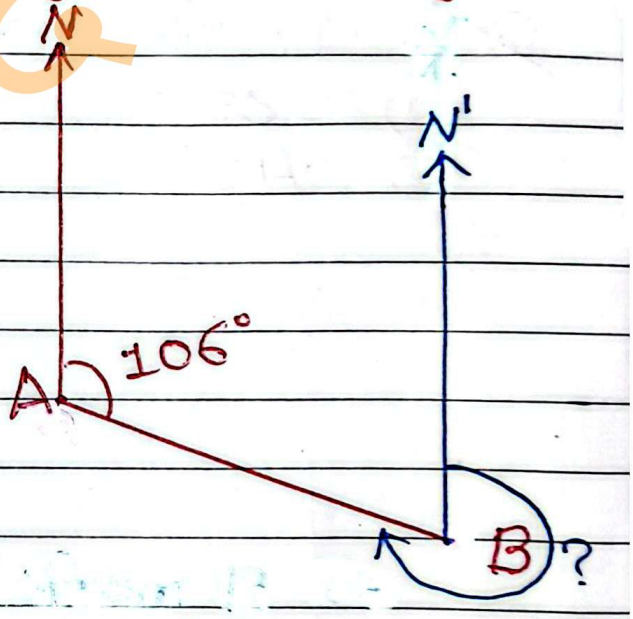


(d)



VVI

Q.2. In the adjoining figure, bearing B from A is 106°, find the bearing of A from B.



⇒ Sol^{n}.

Here,

The bearing of B from A = 106°

Now,

$\angle NAB + \angle N'BA = 180°$

[$\because$ Being co-interior angle]

or, $106° + \angle N'BA = 180°$

or, $\angle N'BA = 180° - 106°$

$\therefore \angle N'BA = 74°$

You can use Reverse bearing concepts also

The bearing of A from B is

$= 360° - 74° = 286°$

Q.3. A point Q, which is 8cm away from a point P has bearing of 110° in the scale 1cm = 5km.

(a) Draw the bearing according to the above context.

(b) Compare the bearing of P from the point Q and the bearing of Q from P.

⇒ Solⁿ.

(a) Here,

1cm = 5km

PQ = 8cm = 8 × 5km

= 40km

The bearing of Q from P = 110°

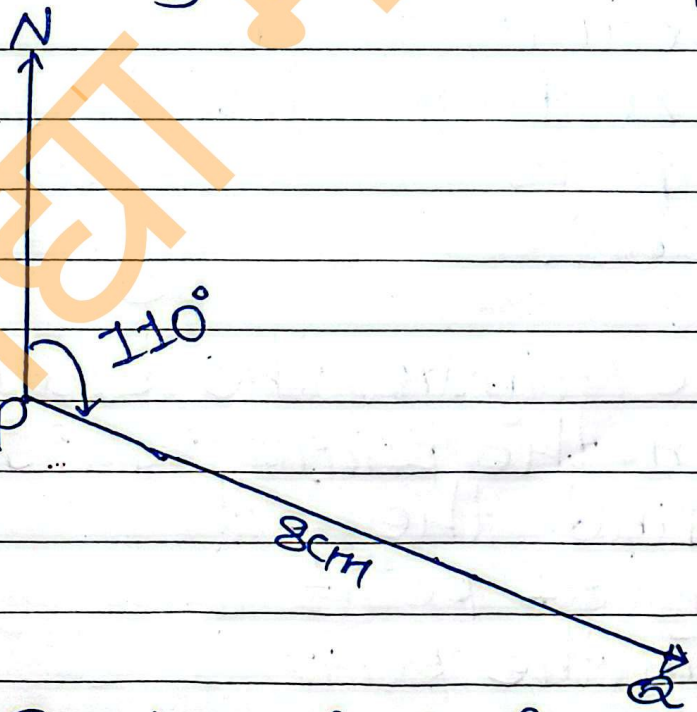
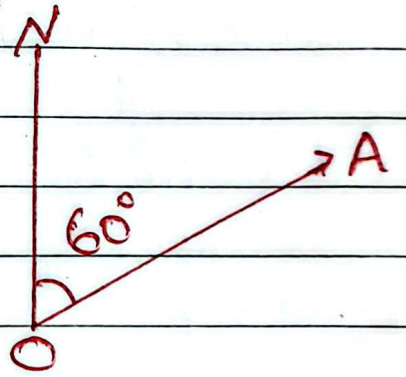


Fig. Bearing of Q from P

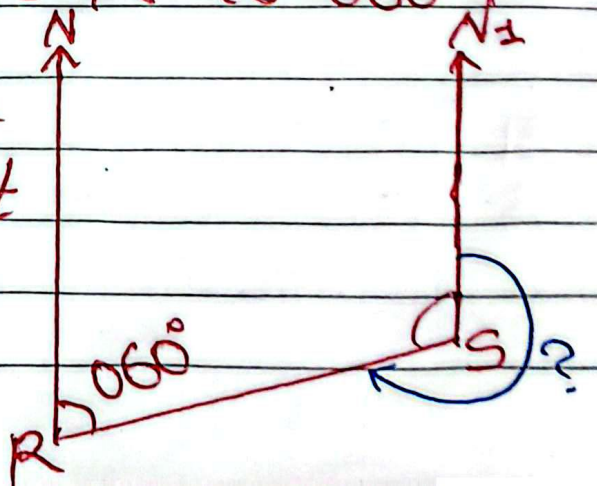
(b) Here,
The bearing of Q from P = 110°
Now,
Reverse bearing = 110° + 180°
= 290°
∴ The bearing of P from Q = 290°
Thus,
the bearing of P from Q is different than the bearing of Q from P by 180°.

I/ Q.4. Write down the bearing of a point A from the point O.

⇒ Sol^n:
The bearing of a point A from the point O is
= 060°.



VVI Q.5. In the figure, the bearing of S from the point R is 060° then find the bearing of point R from the point S.



⇒ Solⁿ.

Here,
The bearing of S from R = 060°
Now,
The bearing of R from S is
= Reverse bearing
= 060° + 180°
= 240° Ans

Alternative Method

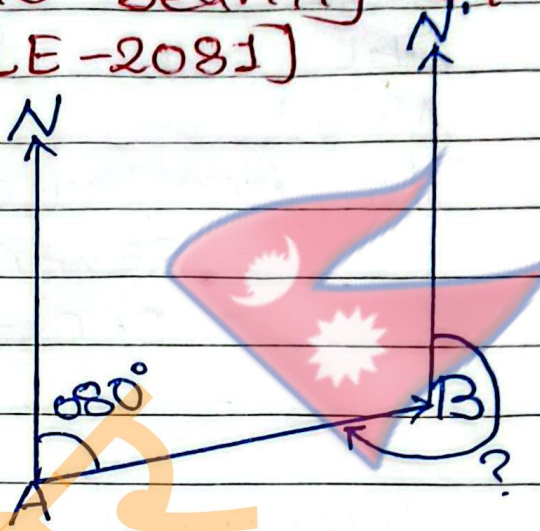
Here,
The bearing of S from R = 060°
Now,
$\angle NRS + \angle N_1SR = 180°$
or, $060° + \angle N_1SR = 180°$
or, $\angle N_1SR = 180° - 60°$
$\therefore \angle N_1SR = 120°$
Thus,
the bearing of R from S is
= 360° − 120°
= 240°

नोट :- Reverse bearing गर्दा दिइएको bearing मा ± 180° गरेर लेख्ने
*bearing हेर्दा जहिले पनि घडि घुम्ने दिशा (clockwise) हेर्ने

Q.6. If the bearing of A to B is 080°, what is the bearing of B to A? [BLE-2081]

⇒ Sol^n.

Here,
The bearing of A to B is
= 080°



Now,
The bearing of B to A is
= Reverse bearing
= 080° + 180°
= 260°

Q.7. In a map, the scale 1cm = 2km, the bearing of a point Q which is 8cm far from the point P is 110°.

(a) Find the real distance from point P to point Q.

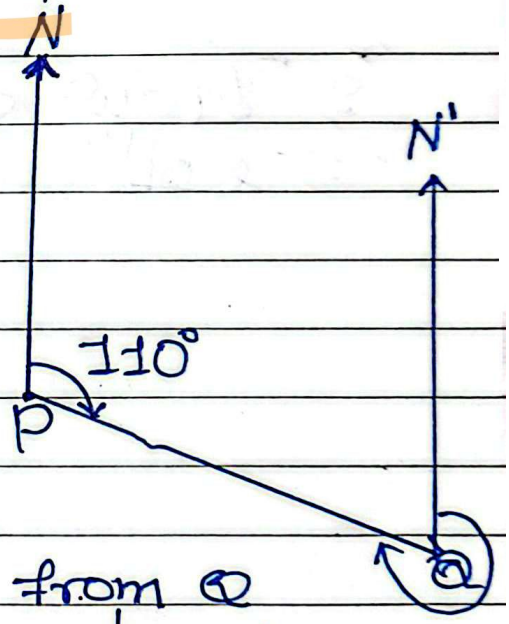
(b) Comparing the bearing of P from point Q and bearing Q from P.

⇒ Sol^{n} Distance in map = 8cm

(a) Scale 1cm = 2km, Then,
The real distance from P to point Q is
= 8 × 2km
= 16km

(b) Here,
The bearing of Q from point P is
= 110°

Now,
The bearing of P from Q is
= Reverse bearing
= 110° + 180°
= 290°



Thus,
the bearing of P from Q is different than the bearing of Q from P by 180°.

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8. Find the bearing of the place p from O in the given figure.

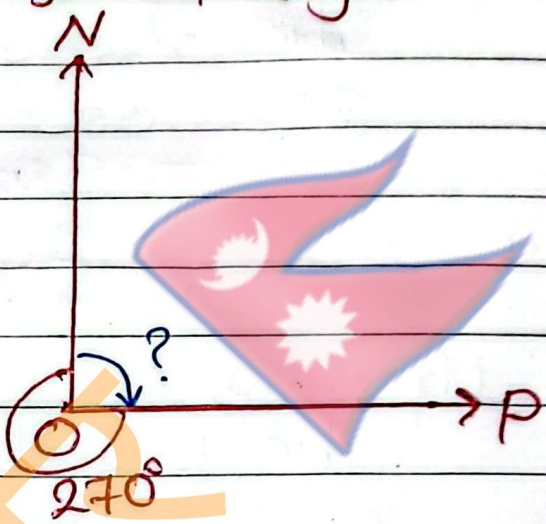
⇒ Sol^{n}.

Here,

The bearing of p from O is

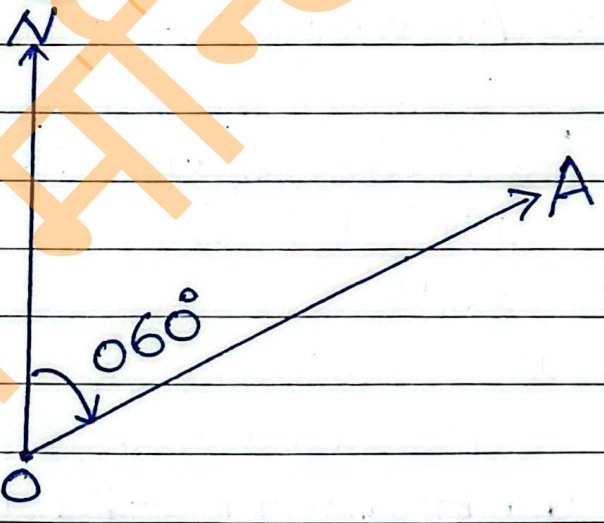
$= 360° - 270°$

$= 90°$



9. Draw a diagram to show N60°E.

⇒ Sol^{n}.

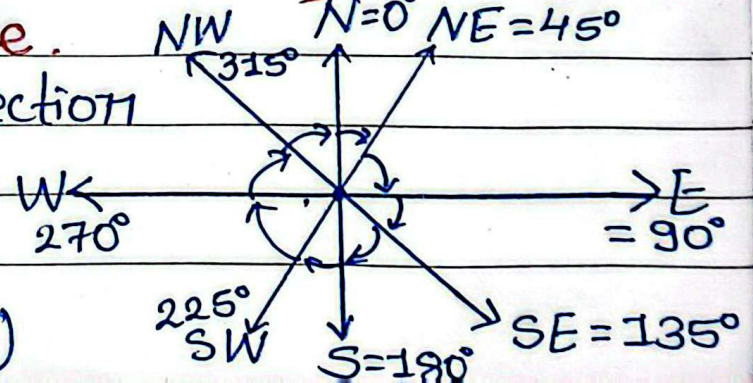


N 60° E

10. Write down the bearing direction of NW in angle.

⇒ The bearing direction of NW in angle is 315°

* [सबैमा 45° को gap]



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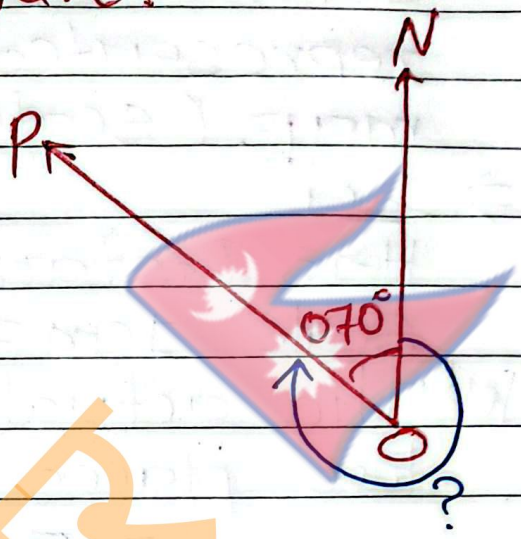
11. What is the bearing of P from O in the given figure?

⇒ Sol^{n}.

The bearing of P from O is

$= 360° - 070°$

$= 290°$.



12. If the distance between two places is 7cm while using a scale of 1cm = 700m, find the actual distance between the two places.

⇒ Sol^{n}

Here, Distance in map = 7cm

Scale 1cm = 700m

Now, The actual distance between the two places is

$= 7 \times 700m$

$= 4900m$

Q.13. What is the actual distance between two places that is represented by 5.5cm on a map. (Scale 1cm = 500m)

⇒ Sol^n.

Here, Distance in the map = 5.5 cm

Scale 1cm = 500m

Now, The actual distance between two places is

= 5.5 × 500m

= 2750m