

ATOMIC ENERGY CENTRAL SCHOOL

CLASS – 6 PRACTICAL GEOMETRY MODULE – 5 HAND OUT

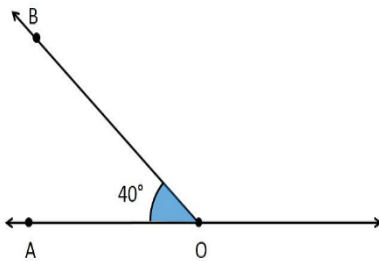
ANGLES

CONSTRUCTING AN ANGLE OF A GIVEN MEASURE

Let us construct an angle of measure 40° .

Steps of construction :

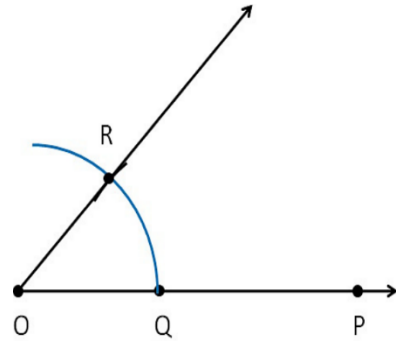
- ▶ Draw AB of any length.
- ▶ Place the centre of the protractor at O and zero edge along protractor. Start with zero near A. Mark point B at 40° .
- ▶ Join OB. $\angle AOB$ is the required angle.



Constructing a copy of an angle of Unknown measure.

- ▶ Given $\angle A$, whose measure is not known.
- ▶ Draw a line l and choose a point P on it.
- ▶ Place the compasses at A draw an arc to cut the rays of $\angle A$ at B and C
- ▶ Use the same compasses setting to draw an arc with O as centre, cutting l in Q
- ▶ Set your compasses to the length BC with the same radius.
- ▶ Place the compasses pointer at Q and draw the arc to cut the arc drawn earlier in R.
- ▶ Join PR.

- ▶ This gives us $\angle P$. it has same measure as $\angle A$
- ▶ This means $\angle QPR$ has same measure as $\angle BAC$



Bisector of an angle

- ▶ Let an angle, say, $\angle A$ is given.
- ▶ With A as centre and using compasses, draw an arc that cuts both rays of $\angle A$.
- ▶ Label the points of intersection as B and C.
- ▶ With B as centre draw (in the interior of angle $\angle A$) an arc whose radius is more than half the length of BC.
- ▶ With the same radius and with C as centre draw another arc in the in the interior of $\angle A$. let the two arcs intersect at B. then AD is the required bisector of $\angle A$

