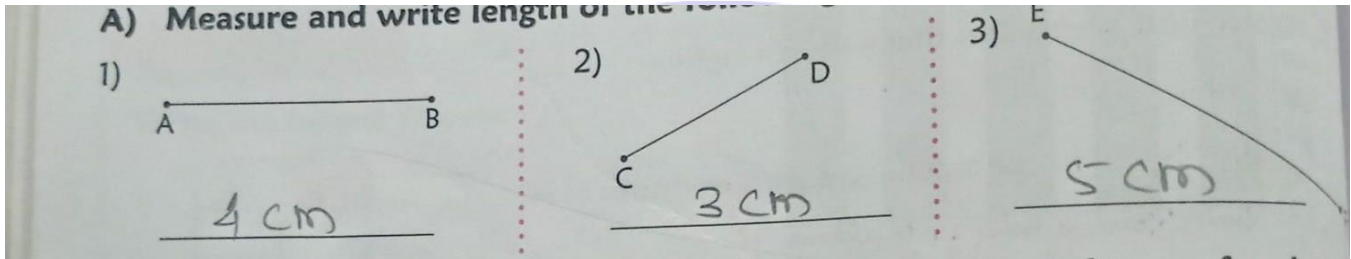
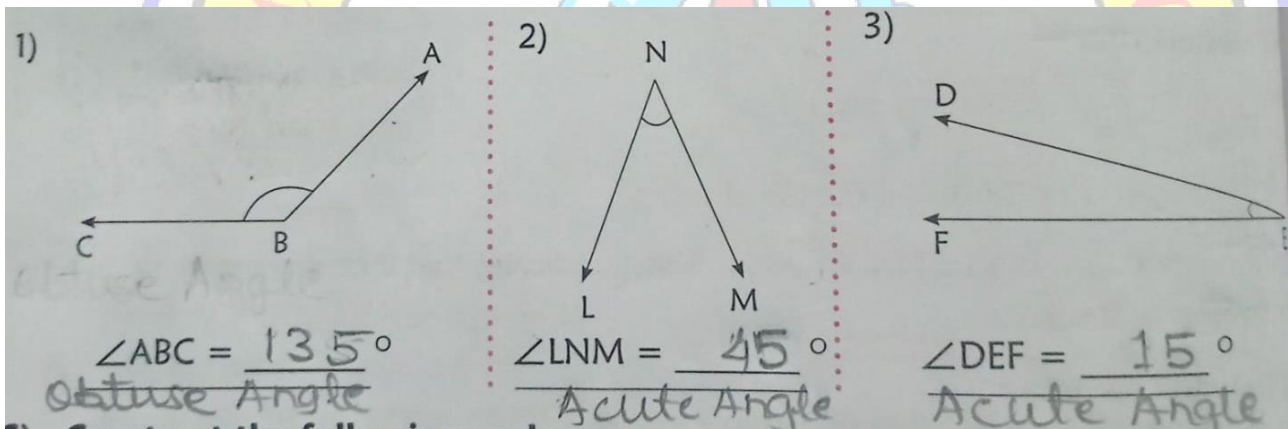


Let's Recall

A) Measure and write length of the following line segments.



B) Measure the following angles. Then write the measure and type of each angles.

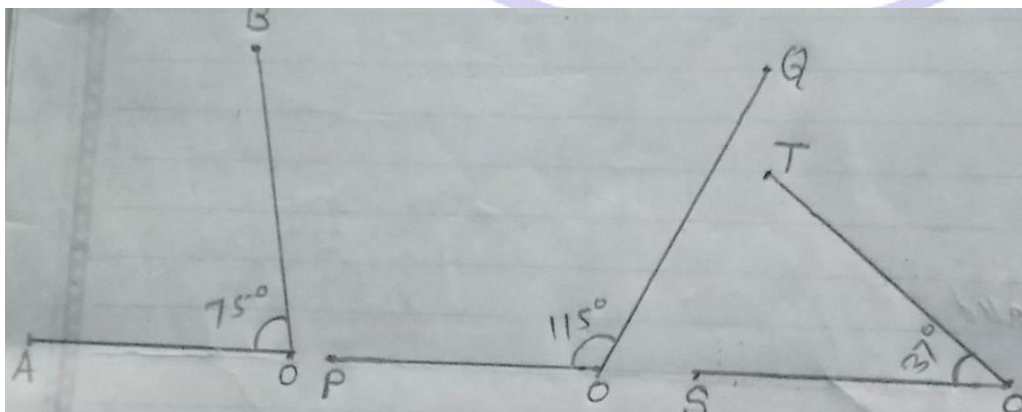


C) Construct the following angles.

1) 75°

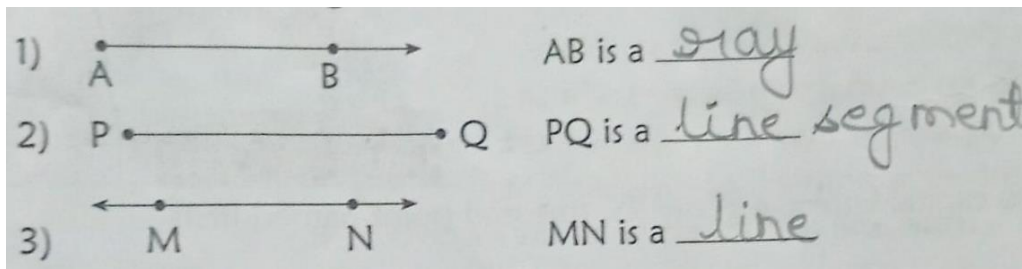
2) 115°

3) 37°

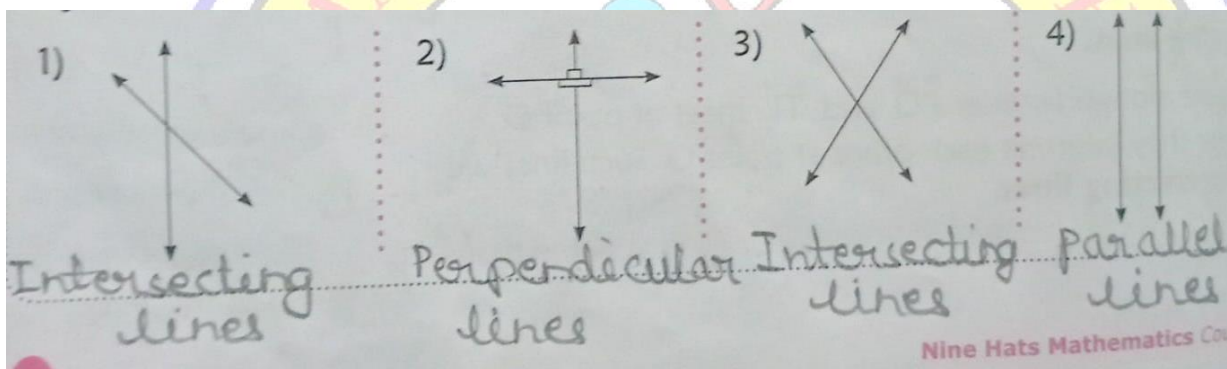


Exercise – 11.1

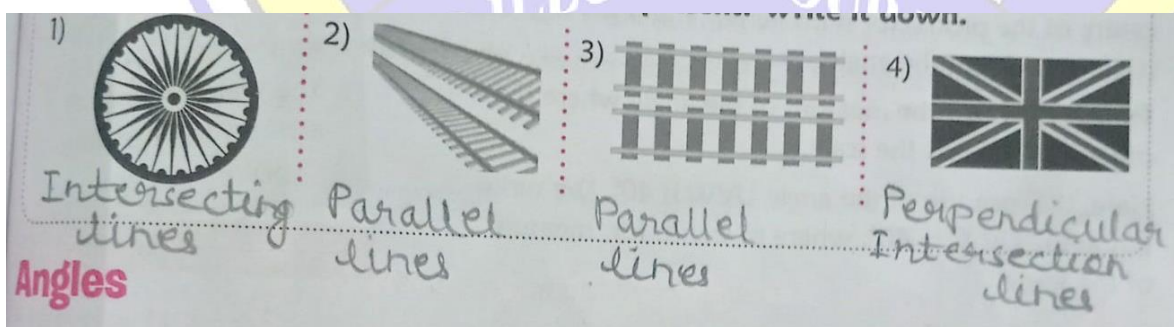
A) Look at the figure and fill in the blanks.



B) State the type of line in each of the following.



C) What kind of line does each figure represent? Write it down.

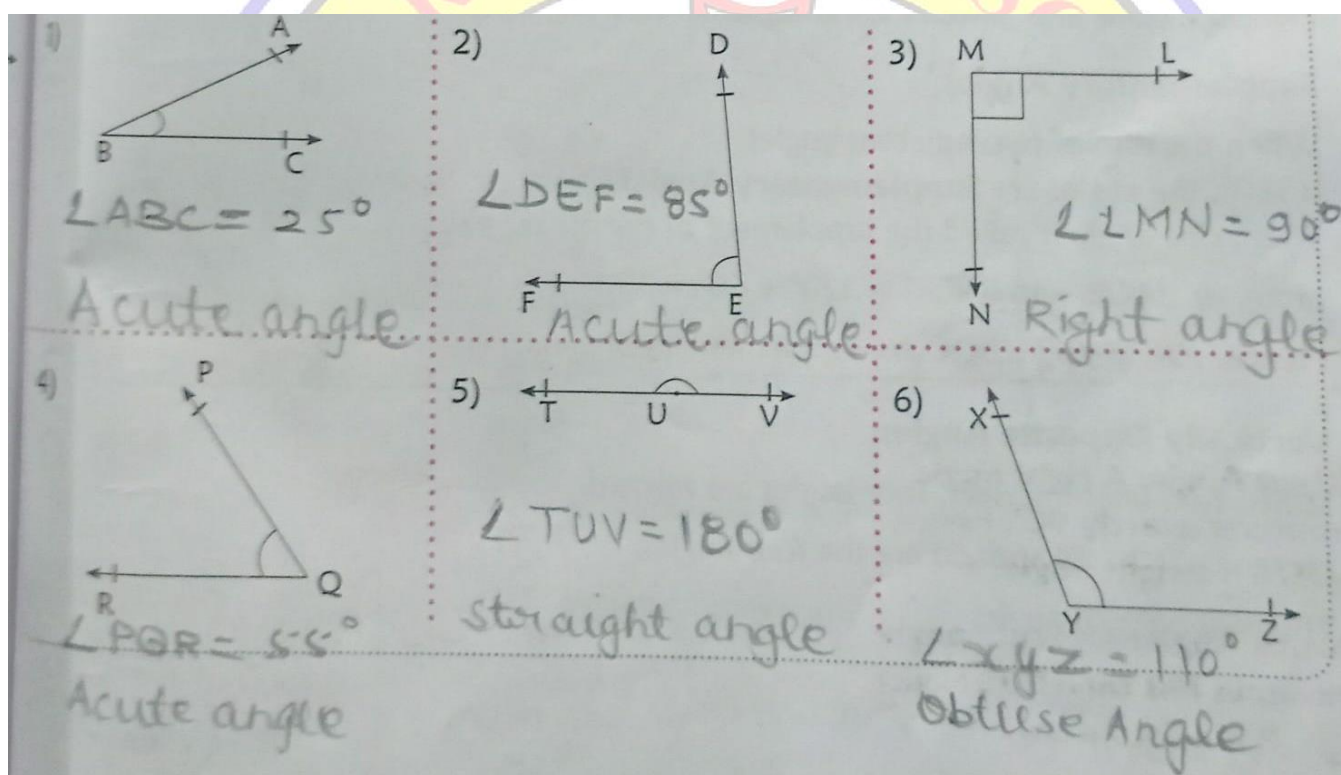


Exercise – 11.2

A) Write A for acute, O for obtuse, R for right and S for straight angle.

- 1) 25° - A 2) 88° - A 3) 175° - O 4) 180° - S
5) 15° - A 6) 76° - A 7) 90° - R 8) 60° - A

B) Measure the given angles. Write the measure and the type of the each angle.

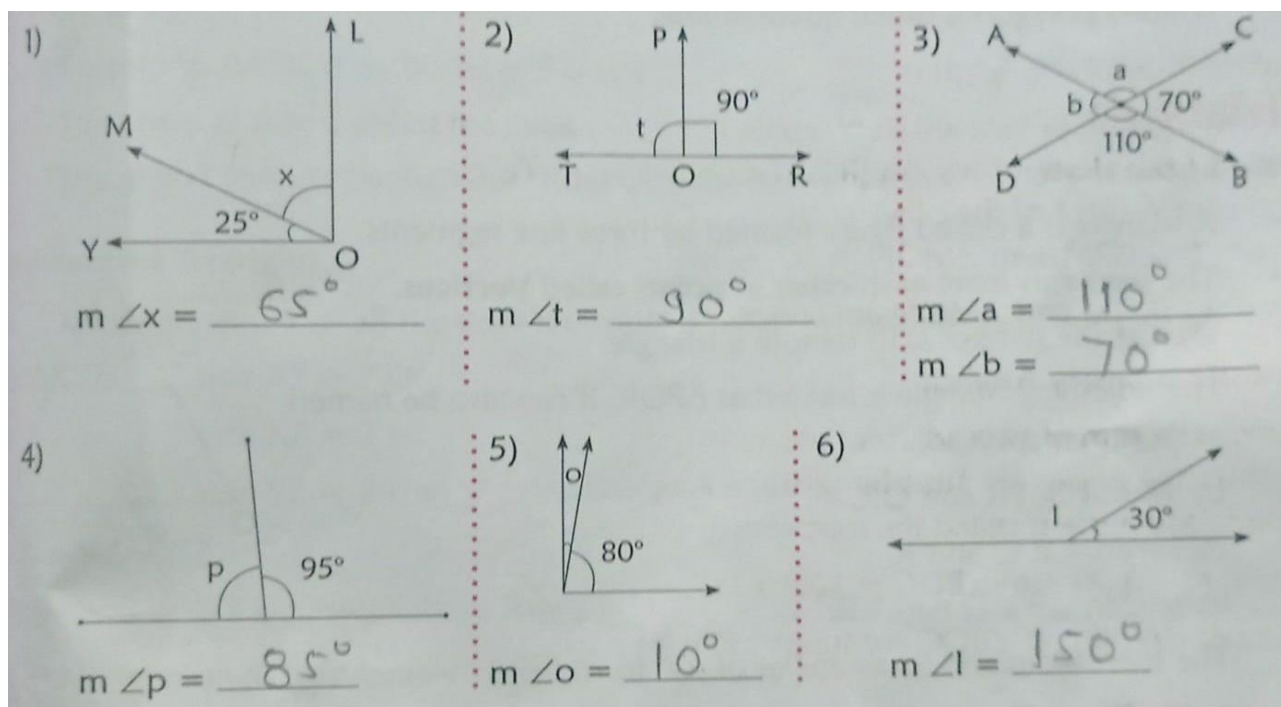


Exercise – 11.3

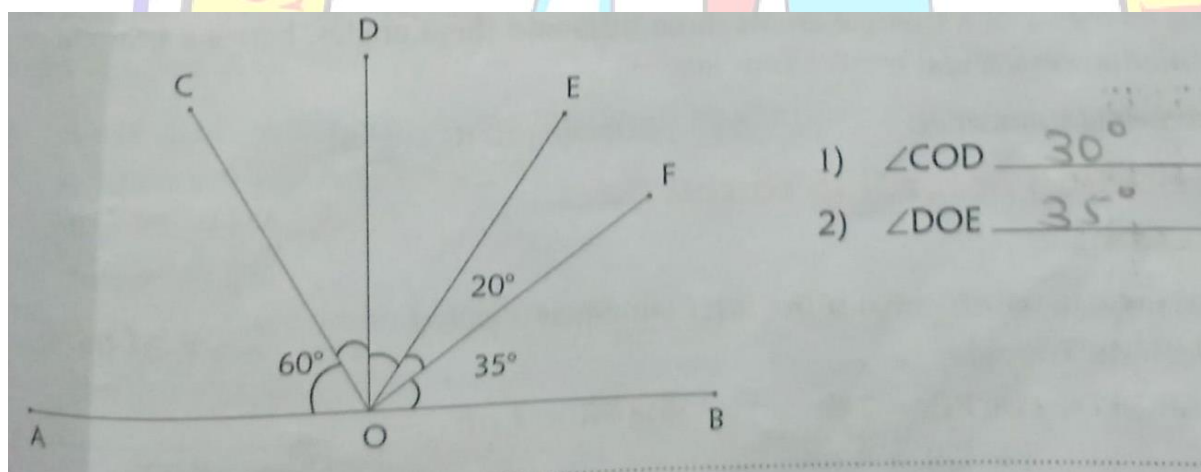
A) Write 'C' for complementary and 'S' for supplementary angles.

- 1) 60° and 120° - S 2) 45° and 45° - C 3) 20° and 70° - C
4) 105° and 75° - S 5) 50° and 40° - C 6) 90° and 90° - S

B) Find the measure in each of the following:

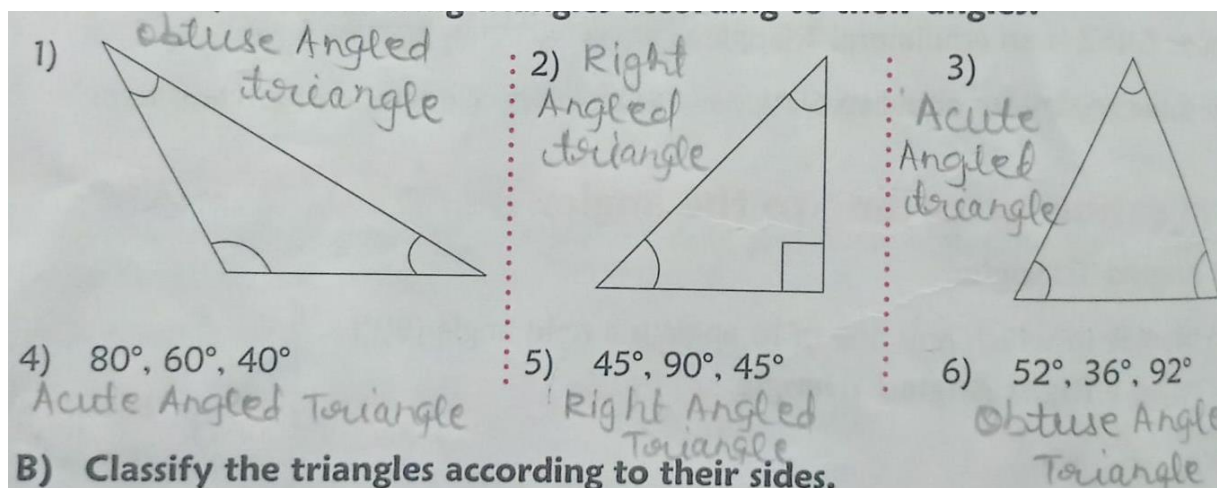


C) Find



Exercise -11.4

A) Classify the following triangles according to their angles.



B) Classify the triangles according to their side.

- 1) 6 cm, 3 cm, 5 cm – Scalene Triangle
- 2) 8 cm, 4 cm, 8 cm – Isosceles Triangle
- 3) 7.5 cm, 7.5 cm, 7.5 cm – Equilateral Triangle
- 4) 12 cm, 7 cm, 11 cm – Scalene Triangle

Exercise – 11.5

A) Write 'P' for possible and 'NP' for not possible.

- 1) A triangle can have more than two obtuse angles. NP
- 2) In $\triangle RST$, side $RS = 7$ cm, $RT = 9$ cm and $ST = 5$ cm. P
- 3) In $\triangle LMN$ $\angle L = 50^\circ$, $\angle M = 50^\circ$ and $\angle N = 50^\circ$. NP
- 4) In $\triangle DEF$ $\angle D = 90^\circ$, $\angle E = 90^\circ$ and $\angle F = 10^\circ$. NP
- 5) In $\triangle PQR$ side $PQ = 6$ cm, $PR = 3$ cm and $QR = 7$ cm. P

B) In $\triangle XYZ$, find the measure of the third angle in each case.

- 1) $\angle X = 50^\circ$, $\angle Y = 50^\circ$, find $\angle Z$

Sol - $\angle X + \angle Y + \angle Z = 180^\circ$

$$= 50^\circ + 50^\circ + \angle Z = 180^\circ$$

$$= 100^\circ + \angle Z = 180^\circ$$

$$= \angle Z = 180^\circ - 100^\circ = 80^\circ$$

$$= \angle Z = 80^\circ$$

2) $\angle Y = 60^\circ$, $\angle Z = 60^\circ$, find $\angle X$

Sol - $\angle X + \angle Y + \angle Z = 180^\circ$

$$= \angle X + 60^\circ + 60^\circ = 180^\circ$$

$$= \angle X + 120^\circ = 180^\circ$$

$$= \angle X = 180^\circ - 120^\circ = 60^\circ$$

$$= \angle X = 60^\circ$$

3) $\angle Z = 100^\circ$, $\angle X = 30^\circ$, find $\angle Y$

Sol - $\angle X + \angle Y + \angle Z = 180^\circ$

$$= 30^\circ + \angle Y + 100^\circ = 180^\circ$$

$$= 130^\circ + \angle Y = 180^\circ$$

$$= \angle Y = 180^\circ - 130^\circ = 50^\circ$$

$$= \angle Y = 50^\circ$$

4) $\angle Z = 25^\circ$, $\angle Y = 40^\circ$, find $\angle X$

Sol - $\angle X + \angle Y + \angle Z = 180^\circ$

$$= \angle X + 40^\circ + 25^\circ = 180^\circ$$

$$= \angle X + 65^\circ = 180^\circ$$

$$= \angle X = 180^\circ - 65^\circ = 115^\circ$$

$$= \angle X = 115^\circ$$