

# NCERT Solutions For Class 6 Maths

## Understanding Elementary Shapes Ex 5.5

Question 1.

Which of the following are models for perpendicular lines:

- (a) The adjacent edges of a table top.
- (b) The lines of a railway track.
- (c) The line segments forming a letter 'L'.
- (d) The letter V.

Solution:

- (a) Yes, the adjacent edges of a table top are the models of perpendicular lines.
- (b) No, the lines of a railway tracks are parallel to each other. So they are not a model for perpendicular lines.
- (c) Yes, the two line segments of 'L' are the model for perpendicular lines.
- (d) No, the two line segments of 'V' are not a model for perpendicular lines.

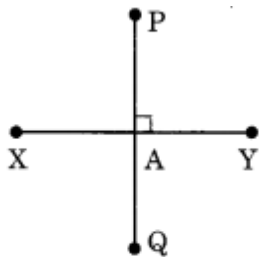
Question 2.

Let  $\overline{PQ}$  be the perpendicular to the line segment  $\overline{XY}$ . Let  $\overline{PQ}$  and  $\overline{XY}$  intersect at in the point A. What is the measure of  $\angle PAY$ ?

Solution:

Since  $\overline{PQ} \perp \overline{XY}$

$$\therefore \angle PAY = 90^\circ$$

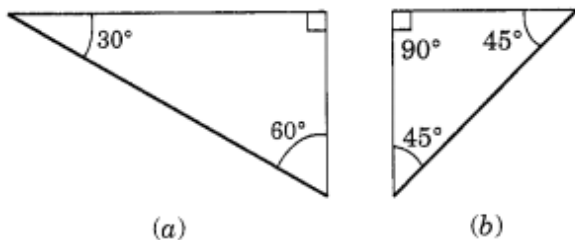


Question 3.

There are two set-squares in your box. What are the measures of the angles that are formed at their corners? Do they have any angle measure that is common?

Solution:

The figures of the two set-squares are given below:



The measure angles of triangle (a) are :  $30^\circ$ ,  $60^\circ$  and  $90^\circ$ .

The measure angles of triangle (b) are  $45^\circ$ ,  $45^\circ$  and  $90^\circ$ .

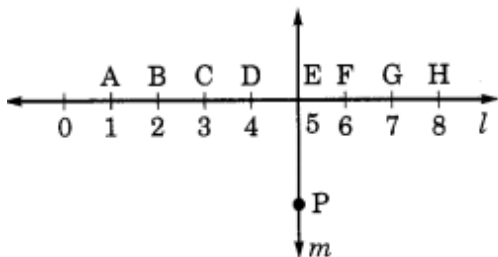
Yes, they have a common angle of measure  $90^\circ$ .

Question 4.

Study the diagram. The line  $l$  is perpendicular to line  $m$ .

(a) Is  $CE = EG$ ?

(b) Does  $PE$  bisects  $CG$ ?



(c) Identify any two line segments for which  $PE$  is the perpendicular bisector.

(d) Are these true?

(i)  $AC > FG$

(ii)  $CD = GH$

(iii)  $BC < EH$

Solution:

(a) Yes,

Since,  $CE = 2$  units and  $EG = 2$  units

Hence,  $CE = EG$ .

(b) Yes,  $PE$  bisects  $CG$

(c) Required line segments for which  $PE$  is perpendicular bisector are:  $\overline{BG}$  and  $\overline{DF}$

(d) (i) True (ii) True (iii) True