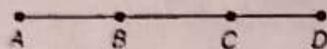


Understanding Elementary Shapes

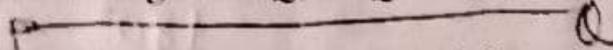
Worksheet 1 (Measuring Line Segments)

1 Fill in the blanks

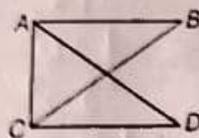
- (i) The measure of each line segment is a unique number, called its length.
- (ii) A line segment is a fixed portion of a line.
- (iii) In a line segment \overline{AB} , the points A and B are called the end points of the segment.
- (iv) Ruler and divider are useful to compare lengths of line segments.
- (v) Sometimes, two line segments can be compared by observation.
- (vi) The line segments in the given figure are \overline{AB} , \overline{AC} , \overline{AD} , \overline{BC} , \overline{BD} and \overline{CD} .



- 2 Draw any line segment \overline{PQ} and take any point R lying in between P and Q . Find the length of PQ , QR and RP . In a line segment \overline{PQ} , is $PQ = RP + RQ$? If yes, why?



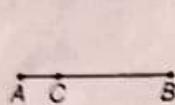
- 3 In the given figure, write the number of line segments and their names.



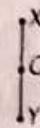
→ \overline{AB} , \overline{BC} , \overline{CD} , \overline{DA} , \overline{DB} ,
total 5.

- 4 Which points in the given figures, appear to be mid-points of the line segments? When you locate a mid-point, name the two equal line segments formed by it.

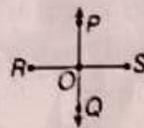
① No mid point



(i)



(ii)

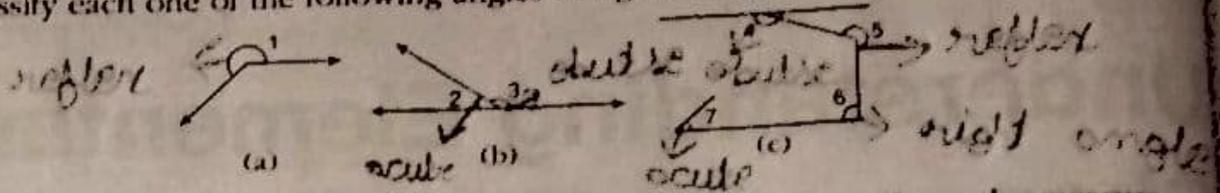


(iii)

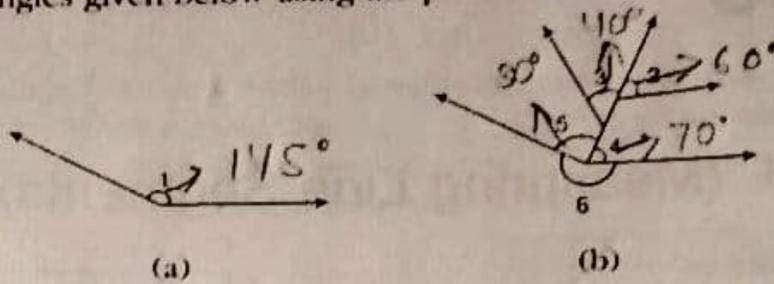
- 5 If P , Q and R are three points on a line such that $PQ = 6$ cm, $QR = 4$ cm and $PR = 10$ cm, then which one of them will lie between the other two?

Worksheet 2 (Types of Angles and Their Measures)

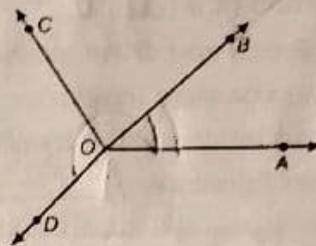
1 Classify each one of the following angles as right, straight, acute, obtuse or reflex.



2 Measure the angles given below using the protractor and write down the measure.



3 Measure and classify each angle.



	Angle	Measure	Type
(a)	$\angle DOA$	180°	straight
(b)	$\angle BOA$	43°	acute
(c)	$\angle COA$	120°	obtuse
(d)	$\angle BOC$	80°	acute
(e)	$\angle DOC$	105°	obtuse

4 Fill in the blanks

- (i) The measure of a right angle is 90° .
- (ii) The measure of a straight angle is 180° .
- (iii) The measure of a complete angle is 360° .
- (iv) The measure of a zero angle is 0° .
- (v) The measure of an acute angle is between 0 and 90 .
- (vi) The measure of an obtuse angle is between 90 and 180 .

5 Choose the correct answer and fill in the blanks.

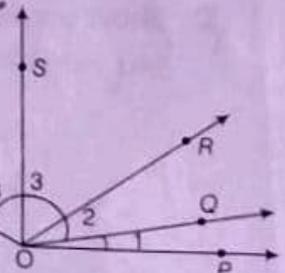
- (i) On moving from 3 to 6, the angle made by the hour hand of the clock, is 1 right angle
 [1 right angle/2 right angles]
- (ii) On moving from 12 to 3, the angle made by the hour hand of the clock, is 1 right angle
 [1 right angle/2 right angles]

6 Very short answer type questions

- (i) What is the angle between minute hand and hour hand of a clock when minute hand is at 1 and hour hand is at 12? Also, find its reflex angle. $\frac{360}{12} = 30$ Ans
- (ii) What fraction of a clockwise revolution does the hour hand of a clock turn through, when it goes from
 (a) 6 to 9? $90 = \frac{1}{4}$ (b) 7 to 1? $180 = \frac{1}{2}$ (c) 8 to 11? $90 = \frac{1}{4}$ (d) 5 to 1? $240 = \frac{2}{3}$
- (iii) Which direction will you face, if you start facing
 (a) South and make $\frac{1}{2}$ of a revolution clockwise? \rightarrow North
 (b) East and make $4 \frac{1}{2}$ of a revolution clockwise? \rightarrow West
 (c) West and make $\frac{1}{4}$ of a revolution anti-clockwise? \rightarrow South
 (d) North and make $\frac{3}{4}$ of a revolution clockwise? \rightarrow West

(iv) Name the following angles of the figure, using three letters

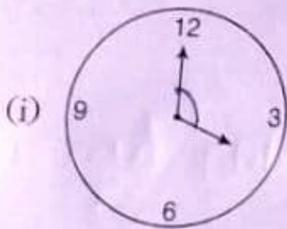
- (a) $\angle 1, \angle 2, \angle 3$ and $\angle 4 \rightarrow \angle 1 \rightarrow 10^\circ, \angle 2 \rightarrow 35^\circ, \angle 3 \rightarrow 90^\circ, \angle 4 \rightarrow 150^\circ$
 (b) $\angle 1 + \angle 2 \rightarrow \angle 1 \rightarrow 10^\circ, \angle 2 \rightarrow 35^\circ = 35 + 10 = 45^\circ$
 (c) $\angle 3 + \angle 4 \rightarrow \angle 3 \rightarrow 90^\circ, \angle 4 \rightarrow 150^\circ = 90 + 150 = 240^\circ$
 (d) $\angle 1 + \angle 2 + \angle 3 \rightarrow \angle 1 \rightarrow 10^\circ, \angle 2 \rightarrow 35^\circ, \angle 3 \rightarrow 90^\circ = 10 + 35 + 90 = 135^\circ$
 (e) $\angle 2 + \angle 3 + \angle 4 \rightarrow \angle 2 \rightarrow 35^\circ, \angle 3 \rightarrow 90^\circ, \angle 4 \rightarrow 150^\circ = 35 + 90 + 150 = 275^\circ$



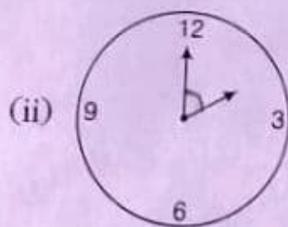
7 How many one-third of right angles do you make, if you start facing

- (i) North and turn clockwise to East? $- 3$ (ii) North and turn clockwise to West? $- 9$
 (iii) West and turn anti-clockwise to North? 9 (iv) South and turn clockwise to East? $- 9$

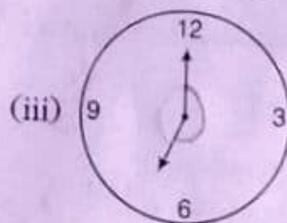
8 Find the angle between the hands of the clock in each figure.



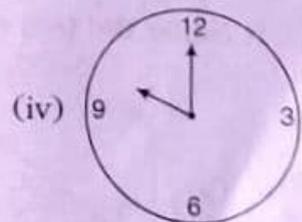
4:00 pm



2:00 pm



7:00 am



10:00 am

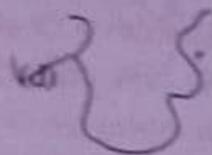
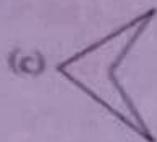
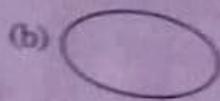
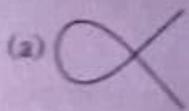
obtuse angle (ii) acute angle (iii) reflex angle (iv) reflex angle

SUMMATIVE ASSESSMENT

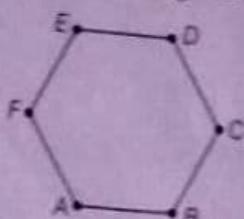
BASED ON COMPLETE CHAPTER

1 Multiple choice questions

(i) Which of the following is an open curve? (1 mark each)



(ii) In the given figure, the number of diagonals is



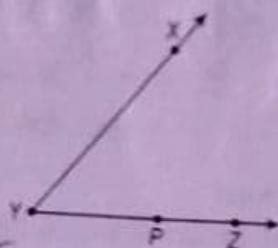
(a) 9

(b) 18

(c) 27

(d) 36

(iii) In the given figure, $\angle XYZ$ cannot be written as



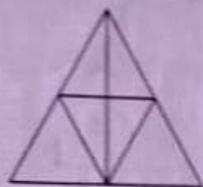
(a) $\angle Y$

(b) $\angle ZXY$

(c) $\angle ZYX$

(d) $\angle XYP$

(iv) The number of triangles in the given figure is



(a) 10

(b) 12

(c) 13

(d) 14

(v) Which of the following is not an example of parallel lines?

(a) Opposite edges of a book

(b) Beam of light from a light house

(c) Bars on ladder

(d) Tracks of a railway line

2 Choose the correct answer and fill in the blanks

(1 mark each)

(i) The maximum number of points of intersection of two lines is one.

[one/two/three]

(ii) The maximum number of points of intersection of three lines is three.

[one/two/three]