Board –CBSE	Class – 6th	Topic – Understanding Elementary Shapes Ex:5.4

Exercise – 5.4

Q1. What is the measure of (i) a right angle (ii) a straight angle?

Sol. (i) Measure of a right angle = 90°

(ii) Measure of a straight angle = 180°

Q2. Say True or False:

(a) The measure of an acute angle < 90°

(b) The measure of an obtuse angle < 90°

(c) The measure of a reflex angle > 180°

(d) The measure of one complete revolution = 360°

(e) If m ∠A = 53° and ∠B = 35°, then m∠A > m∠B.

Sol. (a) True

(b) False

(c) True

(d) True

(e) True

Q3. Write down the measures of

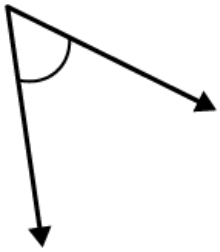
(a) some acute angles

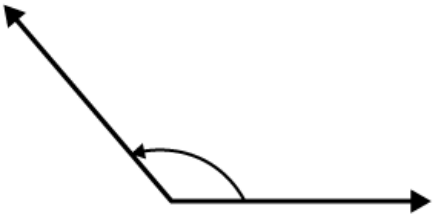
(b) some obtuse angles

Sol. (a) 25°, 63°, and 72° are acute angles.

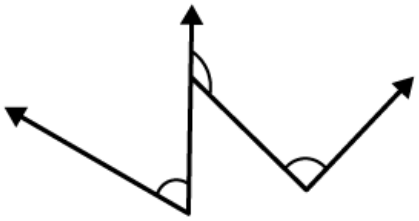
(b) 105°, 120°, and 135° are obtuse angles.

Q4. Measure the angles given below using the protractor and write down the measurement.


(a)


(b)


(c)


(d)

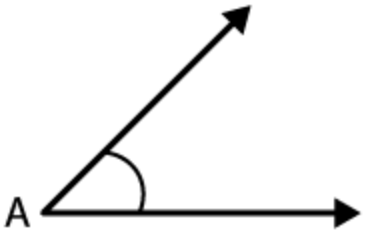
Sol. (a) 45°

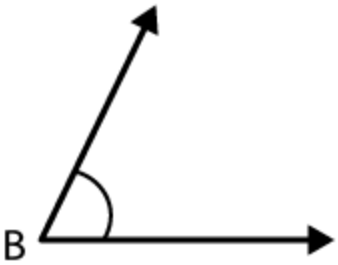
(b) 125°

(c) 90°

(d) $\angle 1 = 60°, \angle 2 = 90°, \angle 3 = 125°$

Q5. Which angle has a large measure? First estimate and then measure.





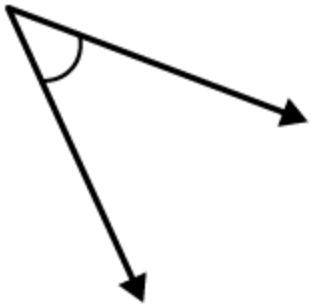
The measure of Angle A =

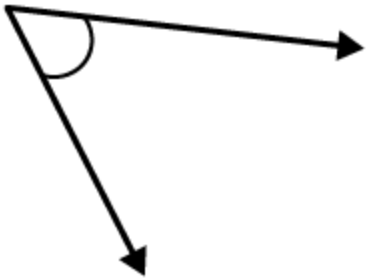
The measure of Angle B =

Sol. The measure of Angle A = 40°

The measure of Angle B = 60°.

Q6. From these two angles which have large measures? Estimate and then confirm by measuring them.





Sol. The opening of angle (b) is more than angle (a).

∴ Measure of angle (a) = 45°

and the measure of angle (b) = 60°

Q7. Fill in the blanks with acute, obtuse, right, or straight:

(a) An angle whose measure is less than that of a right angle is …… .

(b) An angle whose measure is greater than that of a right angle is …… .

(c) An angle whose measure is the sum of the measures of two right angles is …… .

(d) When the sum of the measures of two angles is that of a right angle, then each one of them is …… .

(e) When the sum of the measures of two angles is that of a straight angle and if one of them is acute then the other should be …… .

Sol. (a) acute

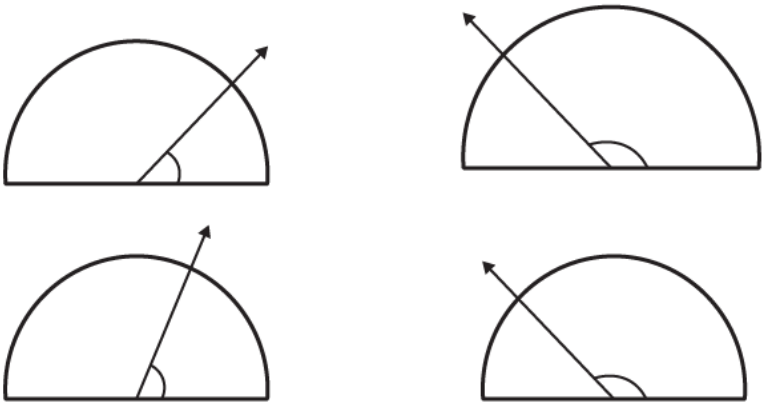
(b) obtuse

(c) straight

(d) acute

(e) obtuse

Q8. Find the measure of the angle shown in each figure. (First estimate with your eyes and then find the actual measurement with a protractor).



Sol. (a) Measure of the angle = 40°

(b) Measure of the angle = 130°

(c) Measure of the angle = 65°

(d) Measure of the angle = 135°.

Q9. Find the angle measure between the hands of the clock in each figure:

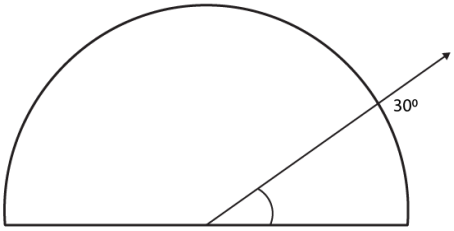
9.00 am 1.00 pm 6.00 pm

Sol. (i) The angle between the hour hand and minute hand of a clock at 9.00 a.m = 90°

(ii) The angle between the hour hand and minute hand of a clock at 1.00 p.m = 30°

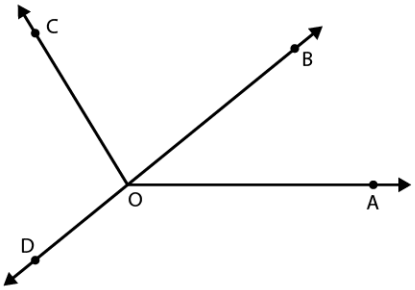
(iii) The angle between the hour hand and minute hand of a clock at 6.00 p.m = 180°.

Q10. Investigate: In the given figure, the angle measures 30°. Look at the same figure through a magnifying glass. Does the angle become larger? Does the size of the angle change?



Sol. It is an activity. So try it yourself.

Q11. Measure and classify each angle:



Angle	Measure	Type
$\angle AOB$		
$\angle AOC$		
$\angle BOC$		
$\angle DOC$		
$\angle DOA$		
$\angle DOB$		

Sol.

Angle	Measure	Type

$\angle AOB$	40°	Acute
$\angle AOC$	125°	Obtuse
$\angle BOC$	85°	Acute
$\angle DOC$	95°	Obtuse
$\angle DOA$	140°	Obtuse
$\angle DOB$	180°	Straight