

**Class.6.Maths By: Prashant Kumar**

**Understanding Elementary Shapes**

**(Solved Exercise)**

**Ex 5.3**

**Q1.Match the following:**

Question 1:

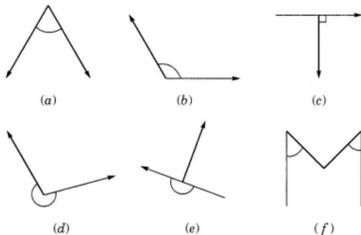
Match the following:

- (i) Straight angle    (a) Less than one-fourth of a revolution
- (ii) Right angle    (b) More than half of revolution
- (iii) Acute angle    (c) Half of a revolution
- (iv) Obtuse angle    (d) One-fourth of a revolution
- (v) Reflex angle.    (e) Between  $\frac{1}{4}$  and  $\frac{1}{2}$  of a revolution
- (f) One complete revolution

**Solution:**

- (i) ↔ (c)
- (ii) ↔ (d)
- (iii) ↔ (a)
- (iv) ↔ (e)
- (v) ↔ (b)

**Q2.Classify each one of the following angles**



**Solution:**

- (a) Acute angle
- (b) Obtuse angle
- (c) Right angle
- (d) Reflex angle

- (e) Straight angle
- (f) Acute angle

**Ex-5.4**

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

**Solution:**

- (i) Measure of a right angle =  $90^\circ$
- (ii) Measure of a straight angle =  $180^\circ$

**Q2. Say True or False:**

- (a) The measure of an acute angle  $< 90^\circ$
- (b) The measure of an obtuse angle  $< 90^\circ$
- (c) The measure of a reflex angle  $> 180^\circ$
- (d) The measure of one complete revolution =  $360^\circ$
- (e) If  $m\angle A = 53^\circ$  and  $\angle B = 35^\circ$ , then  $m\angle A > m\angle B$ .

**Solution:**

- (a) True
- (b) False
- (c) True
- (d) True
- (e) True

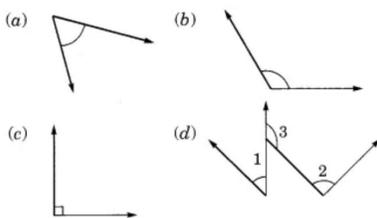
**Q3. Write down the measures of**

- (a) some acute angles
- (b) some obtuse angles

**Solution:**

- (a)  $25^\circ$ ,  $63^\circ$  and  $72^\circ$  are acute angles.
- (b)  $105^\circ$ ,  $120^\circ$  and  $135^\circ$  are obtuse angles.

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



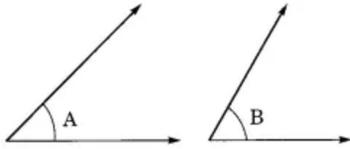
**Solution:**

- (a)  $45^\circ$
- (b)  $120^\circ$
- (c)  $90^\circ$
- (d)  $\angle 1 = 60^\circ$ ,  $\angle 2 = 90^\circ$ ,  $\angle 3 = 135^\circ$

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

Measure of Angle A =

Measure of Angle B =



**Solution:**

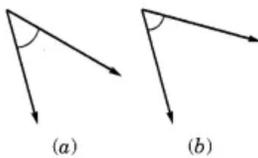
Measure of Angle A =  $40^\circ$

Measure of Angle B =  $65^\circ$ .

**Q6. From these two angles which has large measure? Estimate and then confirm by measuring them.**

**Solution:**

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



$\therefore$  Measure of angle (a) =  $45^\circ$

and the measure of angle (b) =  $55^\circ$

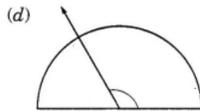
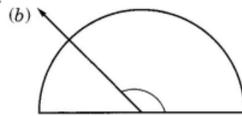
**Q7. Fill in the blanks with acute, obtuse, right or straight:**

- (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 .....

**Solution:**

- (a) acute
- (b) obtuse
- (c) straight
- (d) acute
- (e) obtuse

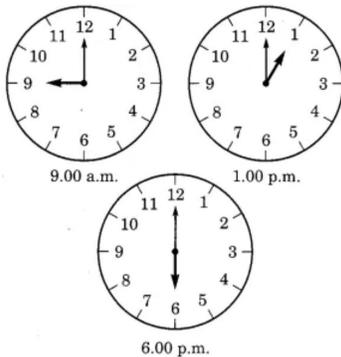
**Q8. Find the measure of the angle shown in each figure. (First estimate with your eyes and then find the actual measure with a protractor).**



**Solution:**

- (a) Measure of the angle =  $40^\circ$
- (b) Measure of the angle =  $130^\circ$
- (c) Measure of the angle =  $65^\circ$
- (d) Measure of the angle =  $135^\circ$ .

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



**Solution:**

- (i) The angle between hour hand and minute hand of a clock at 9.00 a.m =  $90^\circ$
- (ii) The angle between the hour hand and minute hand of a clock at 1.00 p.m =  $30^\circ$
- (iii) The angle between the hour hand and minute hand of a clock at 6.00 p.m =  $180^\circ$ .

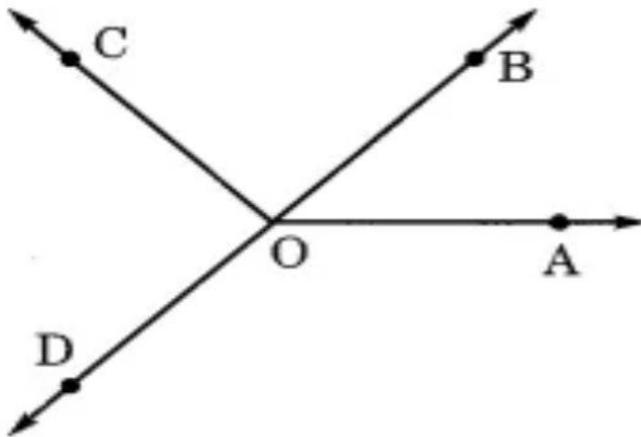
**Q10. Investigate: In the given figure, the angle measures  $30^\circ$ . Look at the same figure through a magnifying glass. Does the angle become larger? Does the size of the angle change?**



**Solution:**

No, the size of the angle does not change.

**Q11. Measure and classify each angle:**



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

**Solution:**

<b>Angle</b>	<b>Measure</b>	<b>Type</b>
$\angle AOB$	$40^\circ$	Acute angle
$\angle AOC$	$125^\circ$	Obtuse angle
$\angle BOC$	$85^\circ$	Acute angle
$\angle DOC$	$95^\circ$	Obtuse angle
$\angle DOA$	$140^\circ$	Obtuse angle
$\angle DOB$	$180^\circ$	Straight angle