



ST. LAWRENCE HIGH SCHOOL



A JESUIT CHRISTIAN MINORITY INSTITUTION

CLASS 8

SUBJECT : Algebra and Geometry

Work sheet 18 answer key

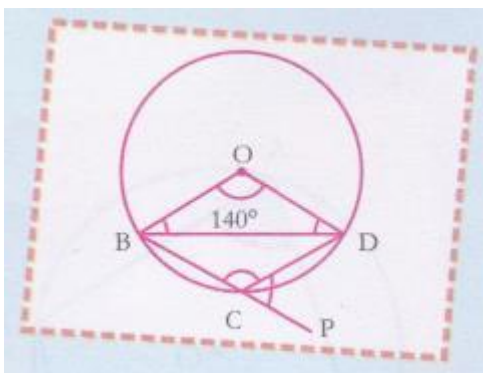
Marks:15

Circles - 3

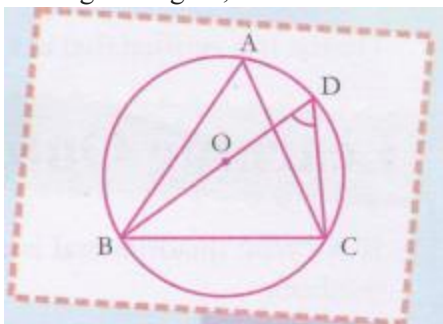
Date:27.4.2020

Answer all the following questions(1×15=15)

1. ABCD is a cyclic quadrilateral, in which $\angle ABC = 90^\circ$. The value of $\angle ADC$ is:
(i) 90°
(ii) 45°
(iii) 70°
(iv) none of these
2. In a circle with centre O, the angle subtended by arc BCD at the centre is 140° . BC is produced to P. Find $\angle DCP$:



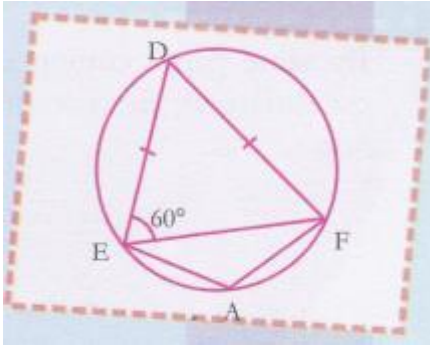
- (i) 70°
(ii) 35°
(iii) 280°
(iv) none of these
3. In the given figure, $\triangle ABC$ is an isosceles triangle with $AB = AC$ and $\angle ABC = 50^\circ$. Find $\angle BDC$:



- (i) 100°
(ii) 25°

- (iii) 80°
- (iv) none of these

4. In the given figure, $\triangle DEF$ is an isosceles triangle with $DE = DF$ and $\angle DEF = 60^\circ$. Find $\angle EAF$:



- (i) 120°
 - (ii) 30°
 - (iii) 300°
 - (iv) none of these
5. ABCD is a cyclic quadrilateral in which BC is parallel to AD, $\angle ADC = 110^\circ$, $\angle BAC = 50^\circ$. Find $\angle DAC$
- (i) 100°
 - (ii) 30°
 - (iii) 60°
 - (iv) none of these
6. ABCD is a cyclic quadrilateral. If $\angle BCD = 100^\circ$, $\angle ABD = 70^\circ$, the value of $\angle ADB$ will be:
- (i) 60°
 - (ii) 30°
 - (iii) 150°
 - (iv) none of these
7. If PQRS is a cyclic quadrilateral, $\angle P = 3x^\circ$, $\angle Q = y^\circ$, $\angle R = x^\circ$, $\angle S = 5y^\circ$, find the value of x° and y° .
- (i) $45^\circ, 30^\circ$
 - (ii) $90^\circ, 60^\circ$
 - (iii) $90^\circ, 30^\circ$
 - (iv) none of these
8. ABCD is a cyclic trapezium in which $AD \parallel BC$, if $\angle B = 70^\circ$, find the value of $\angle A$:
- (i) 70°
 - (ii) 110°
 - (iii) 35°
 - (iv) none of these
9. If ABCD is a cyclic quadrilateral, in which $\angle DBC = 70^\circ$, $\angle BAC = 40^\circ$, find $\angle BCD$:
- (i) 100°
 - (ii) 40°
 - (iii) 70°
 - (iv) none of these
10. Find the measure of the opposite angles of a cyclic quadrilateral if one of them is $11/4$ of the other:
- (i) $48^\circ, 132^\circ$
 - (ii) $29^\circ, 132^\circ$
 - (iii) $48^\circ, 264^\circ$
 - (iv) none of these
11. If one of the angles of a cyclic quadrilateral is 30° , then the value of its opposite angle is
- (i) 150°
 - (ii) 90°
 - (iii) 60°

- (iv) 180°
12. If a cyclic quadrilateral is a parallelogram, then the parallelogram is a
- rectangle
 - Square
 - Rhombus
 - None of these
13. The sum of opposite angles of a cyclic quadrilateral is
- 180°
 - 90°
 - 360°
 - 100°
14. What will be the name of a quadrilateral if the pair of opposite angles is supplementary
- conyclic
 - Cyclic
 - Non cyclic
 - None of these
15. A quadrilateral is called cyclic if all the four vertices are
- conyclic
 - Cyclic
 - Non cyclic
 - None of these

Answers

- (i), $180-90$
- (i) reflex angle $=360-140=220$, angle at circumference $=220/2=110$, so $180-110=70^\circ$
- (iii) angle $A=80^\circ$, angles in same segment are equal
- (i) angle $D=60^\circ$, angle $A=180-60$
- (ii)
- (ii)
- (i) $3x+x=180$, $y+5y=180$
- (ii)
- (iii)
- (i) $x+11/4 x=180$
- (i) $180-30=150^\circ$
- (i)
- (i)
- (ii)
- (i)

