



ST. LAWRENCE HIGH SCHOOL



A JESUIT CHRISTIAN MINORITY INSTITUTION

CLASS 8

SUBJECT :Algebra and Geometry

Work sheet 11

Marks:15

Theorem 1 and Theorem 2(Pamphlet)

Date:18.4.2020

Answer all the following questions($1 \times 15 = 15$)

MULTIPLE-CHOICE QUESTIONS (MCQ)

Choose the correct answer in each of the following questions:

1. In a $\triangle ABC$, if $3\angle A = 4\angle B = 6\angle C$ then $A : B : C = ?$

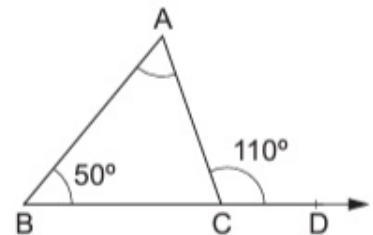
- (a) 3 : 4 : 6 (b) 4 : 3 : 2 (c) 2 : 3 : 4 (d) 6 : 4 : 3

2. In a $\triangle ABC$, if $\angle A - \angle B = 42^\circ$ and $\angle B - \angle C = 21^\circ$ then $\angle B = ?$

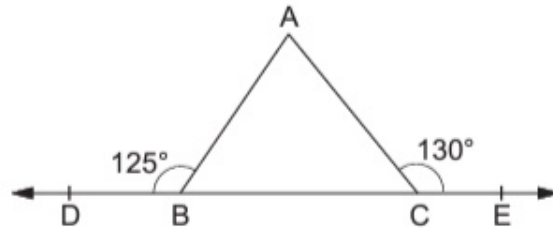
- (a) 32° (b) 63° (c) 53° (d) 95°

3. In a $\triangle ABC$, side BC is produced to D . If $\angle ABC = 50^\circ$ and $\angle ACD = 110^\circ$ then $\angle A = ?$

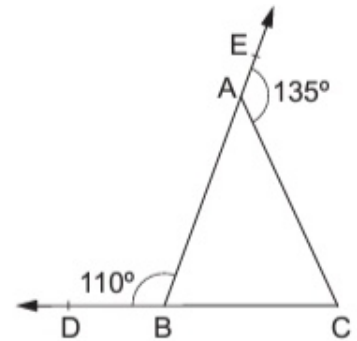
- (a) 160° (b) 60°
(c) 80° (d) 30°



4. Side BC of $\triangle ABC$ has been produced to D on left and to E on right-hand side of BC such that $\angle ABD = 125^\circ$ and $\angle ACE = 130^\circ$. Then, $\angle A = ?$

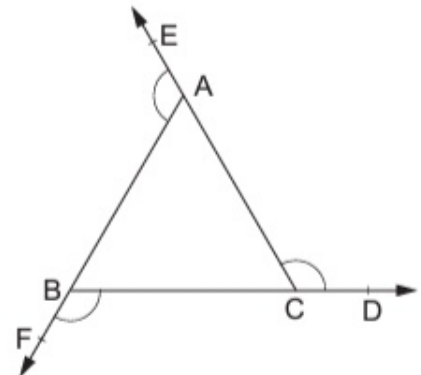


- (a) 50° (b) 55° (c) 65° (d) 75°
5. In the given figure, the sides CB and BA of $\triangle ABC$ have been produced to D and E respectively such that $\angle ABD = 110^\circ$ and $\angle CAE = 135^\circ$. Then, $\angle ACB = ?$



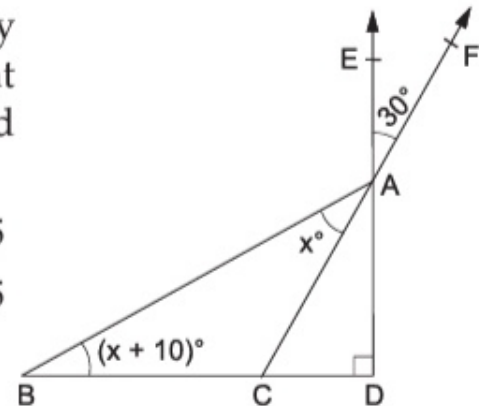
- (a) 65° (b) 45°
(c) 55° (d) 35°

6. The sides BC , CA and AB of $\triangle ABC$ have been produced to D , E and F respectively. $\angle BAE + \angle CBF + \angle ACD = ?$



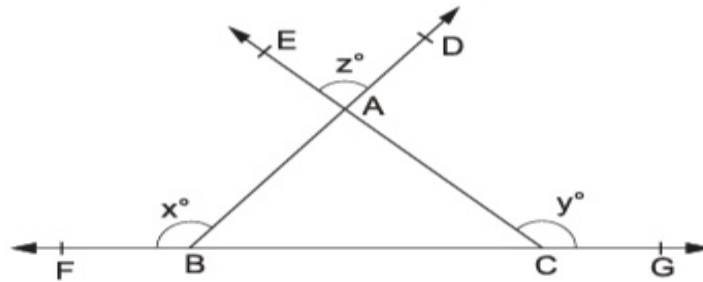
- (a) 240° (b) 300°
(c) 320° (d) 360°

7. In the given figure, $EAD \perp BCD$. Ray FAC cuts ray EAD at a point A such that $\angle EAF = 30^\circ$. Also, in $\triangle BAC$, $\angle BAC = x^\circ$ and $\angle ABC = (x + 10)^\circ$. Then, the value of x is

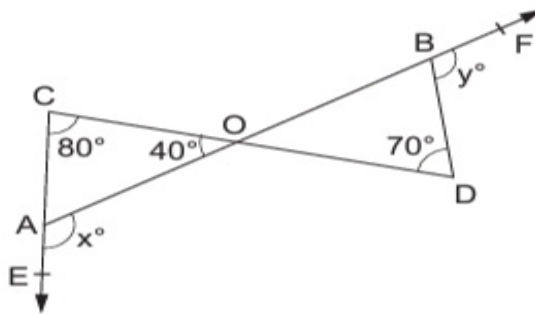


- (a) 20 (b) 25
(c) 30 (d) 35

8. In the given figure, two rays BD and CE intersect at a point A . The side BC of $\triangle ABC$ have been produced on both sides to points F and G respectively. If $\angle ABF = x^\circ$, $\angle ACG = y^\circ$ and $\angle DAE = z^\circ$ then $z = ?$

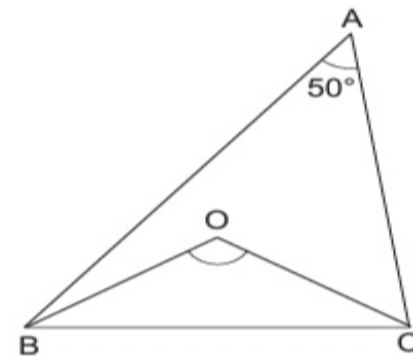
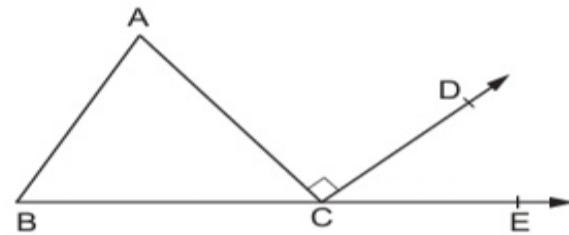


- (a) $x + y - 180$ (b) $x + y + 180$ (c) $180 - (x + y)$ (d) $x + y + 360$
9. In the given figure, lines AB and CD intersect at a point O . The sides CA and OB have been produced to E and F respectively such that $\angle OAE = x^\circ$ and $\angle DBF = y^\circ$.



If $\angle OCA = 80^\circ$, $\angle COA = 40^\circ$ and $\angle BDO = 70^\circ$ then $x^\circ + y^\circ = ?$

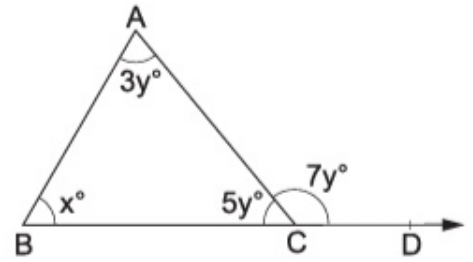
- (a) 190° (b) 230° (c) 210° (d) 270°
10. In a $\triangle ABC$, it is given that $\angle A : \angle B : \angle C = 3 : 2 : 1$ and $\angle ACD = 90^\circ$. If BC is produced to E then $\angle ECD = ?$
- (a) 60°
 (b) 50°
 (c) 40°
 (d) 25°
11. In the given figure, BO and CO are the bisectors of $\angle B$ and $\angle C$ respectively. If $\angle A = 50^\circ$ then $\angle BOC = ?$
- (a) 130° (b) 100°
 (c) 115° (d) 120°



12. In the given figure, side BC of $\triangle ABC$ has been produced to a point D . If $\angle A = 3y^\circ$, $\angle B = x^\circ$, $\angle C = 5y^\circ$ and $\angle CBD = 7y^\circ$. Then, the value of x is

- (a) 60
- (c) 45

- (b) 50
- (d) 35



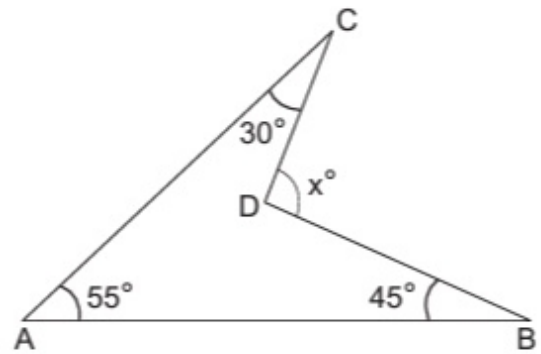
13. If one angle of a triangle is greater than the sum of the other two, then the triangle isangled

- (a) obtuse
- (c) acute

- (b) right
- (d) none of these

14.

Calculate the value of x in the given figure.

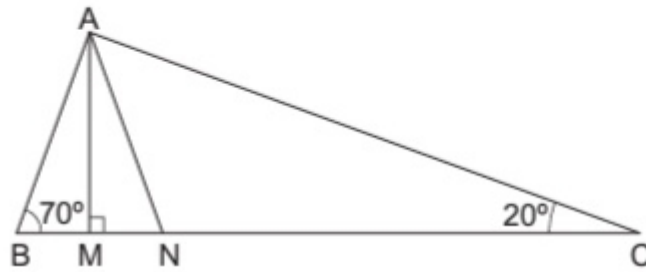


- (a) 130°
- (c) 120°

- (b) 90°
- (d) 180°

15.

In the given figure, $AM \perp BC$ and AN is the bisector of $\angle A$. If $\angle ABC = 70^\circ$ and $\angle ACB = 20^\circ$, find $\angle MAN$.



(a) 25°

(b) 65°

(c) 75°

(d) 125°

Indranil Ghosh

