



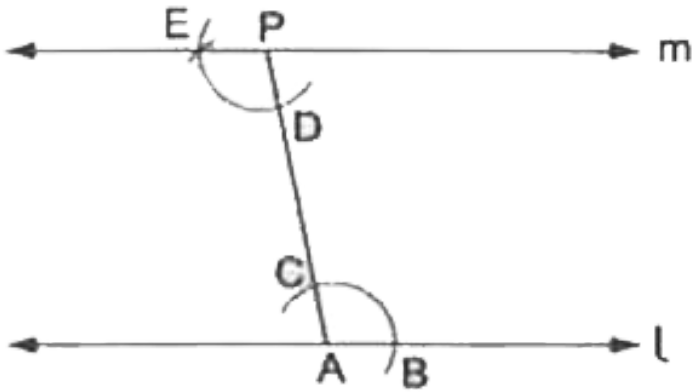
MATHS

BOOKS - RS AGGARWAL MATHS (HINGLISH)

CONSTRUCTIONS

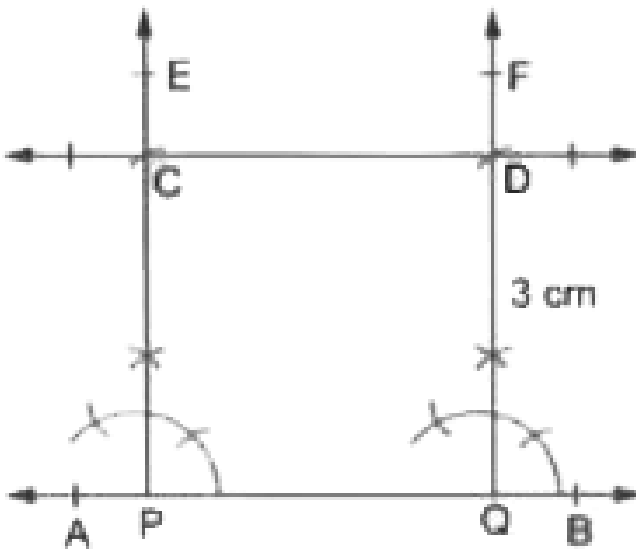
Example

1. Draw a line parallel to a given line l and passing through a given point P .



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2. Draw a line parallel to a given line at a distance of 3 cm from it.



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3. Construct a $\triangle ABC$ in which $BC = 6.2$ cm,
 $AB = 5$ cm and $AC = 4.3$ cm.



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4. Construct a $\triangle PQR$ in which $PQ=5.3$ cm.
 $PR = 4.6$ cm and $QR = 3.8$ cm.



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5. Construct a $\triangle PQR$ in which $QR = 4.2$ cm,
 $\angle Q = 120^\circ$ and $PQ = 3.5$ cm. Draw $PM \perp QR$
.



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6. Construct a $\triangle ABC$ in which $BC = 4.8$ cm,
 $\angle B = 60^\circ$ and $\angle C = 75^\circ$.



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7. Construct a $\triangle ABC$ in which $BC = 5.3$ cm,
 $\angle B = 45^\circ$ and $\angle A = 75^\circ$.



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8. Construct a $\triangle ABC$ in which base $BC = 4.8$ cm, $\angle B = 90^\circ$ and hypotenuse $AC = 6.2$ cm.



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9. Construct a right-angled triangle whose hypotenuse measures 5.6 cm and one of whose acute angles measures 30° .



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1. Draw a line AB and take a point P outside it.
Draw a line CD parallel to AB and passing through the point P .



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2. Draw a line AB and draw another line CD parallel to AB at a distance of 3.5 cm from it.



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3. Draw a line and draw another line m parallel to l at a distance of 4.3 cm from it.



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Exercise B

1. Construct $\triangle PQR$ in which $QR = 6\text{cm}$, $PQ = 4.4\text{cm}$ and $PR = 5.3\text{cm}$.

Draw the bisector of $\angle P$



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2. Construct an equilateral triangle each of whose sides measures 6.2 cm. Measure each one of its angles.



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3. Construct a $\triangle ABC$ in which $AB = AC = 4.8$ cm and $BC = 5.3$ cm. Measure $\angle B$ and $\angle C$. Draw $AD \perp BC$



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4. Construct a $\triangle ABC$ in which $AB = 3.8$ cm, $\angle A = 60^\circ$ and $AC = 5$ cm.



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5. Construct a $\triangle ABC$ in which $BC = 4.3$ cm, $\angle C = 45^\circ$ and $AC = 6$ cm.



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6. Construct a $\triangle ABC$ in which $BC = 6.2$ cm,
 $\angle B = 60^\circ$ and $\angle C = 45^\circ$



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7. Construct a $\triangle ABC$ in which $AB = 7$ cm,
 $\angle A = 45^\circ$ and $\angle C = 75^\circ$.



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8. Construct a $\triangle ABC$ in which $BC = 4.8$ cm, $\angle C = 90^\circ$ and $AB = 6.3$ cm.



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9. Construct a right-angled triangle one side of which measures 3.5 cm and the length of whose hypotenuse is 6 cm.



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10. Construct a right triangle having hypotenuse of length 5.6 cm and one of whose acute angles measures 30°



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Exercise C M C Q

1. The supplement of 45° is

A. 45°

B. 75°

C. 135°

D. 155°

Answer: C



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2. The complement of 80° is

A. 100°

B. 10°

C. 20°

D. 280°

Answer: B



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3. An angle is its own complement. The measure of the angle is

A. 30°

B. 45°

C. 90°

D. 60°

Answer: B



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4. An angle is one-fifth of its supplement. The measure of the angle is

A. 30°

B. 15°

C. 15°

D. 150°

Answer: A



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5. An angle is 24° more than its complement.

The measure of the angle is

A. 47°

B. 57°

C. 53°

D. 66°

Answer: B



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6. An angle is 32° less than its supplement.

The measure of the angle is

A. 37°

B. 74°

C. 148°

D. none of these

Answer: B



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7. Two supplementary angles are in the ratio 3:2. The smaller angle measures

A. 108°

B. 81°

C. 72°

D. none of these

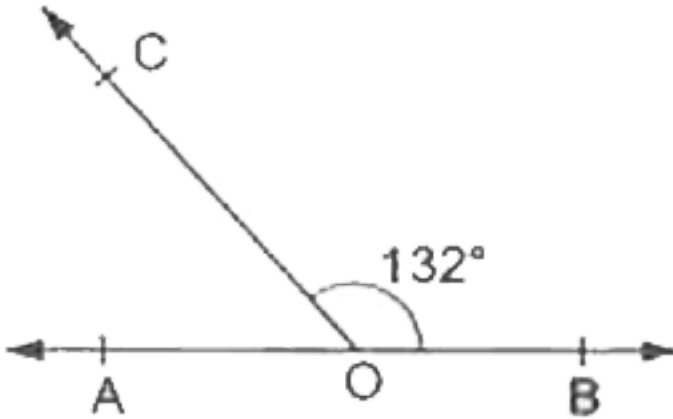
Answer: C



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8. In the given figure, AOB is a straight line and the ray OC stands on it. If $\angle BOC = 132^\circ$,

then $\angle AOC = ?$



A. 68°

B. 48°

C. 42°

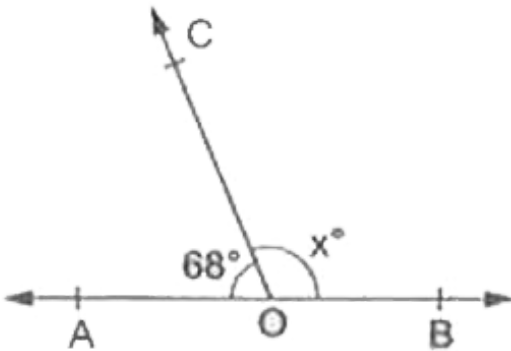
D. none of these

Answer: B



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9. In the given figure, AOB is a straight line, $\angle AOC = 68^\circ$ and $\angle BOC = X^\circ$. The value of x is



A. 32

B. 22

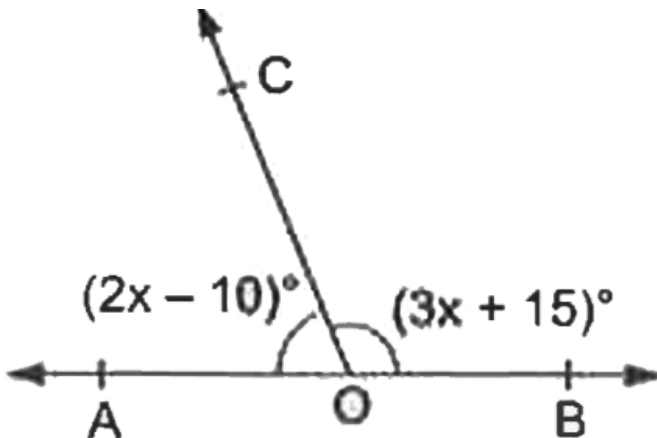
C. 112

D. 132

Answer: C

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10. In the adjoining figure, what value of x will make AOB a straight line?



A. $x = 30$

B. $x = 35$

C. $x = 25$

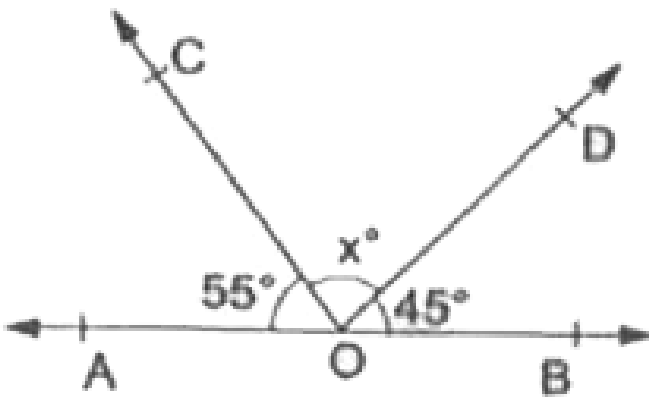
D. $x = 40$

Answer: B



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11. In the given figure, what value of x will make AOB a straight line?



A. $x = 50$

B. $x = 100$

C. $x = 60$

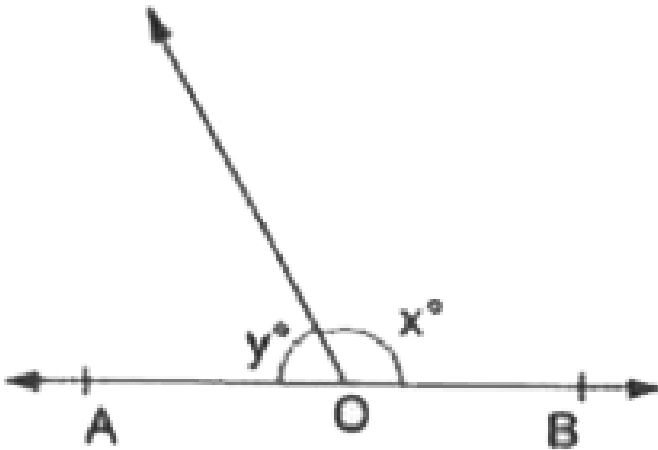
D. $x = 80$

Answer: d



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12. In the given figure, it is given that AOB is a straight line and $4x = 5y$. What is the value of x ?



A. 100

B. 105

C. 110

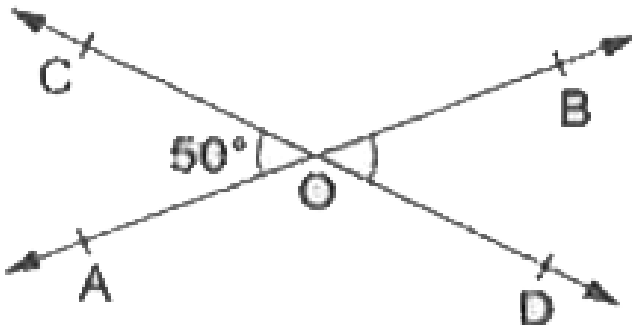
D. 115

Answer: a

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13. In the given figure, two straight lines AB and CD intersect at a point and $\angle AOC = 50^\circ$.

Then, $\angle BOD = ?$



A. 40°

B. 50°

C. 130°

D. 60°

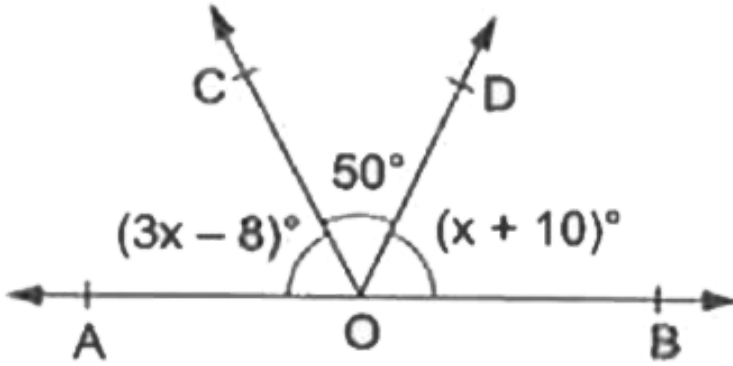
Answer: b



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14. In the given figure, AOB is a straight line, \angle
 $AOC = (3x - 8)^\circ$, $\angle COD = 50^\circ$ and $\angle BOD =$

$(x + 10)^\circ$. The value of x is



- A. 32
- B. 42
- C. 36
- D. 52

Answer: a





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15. In $\triangle ABC$, side BC has been produced to

D. If $\angle ACD = 132^\circ$ and $\angle A = 54^\circ$, then $\angle B = ?$

A. 48° .

B. 78°

C. 68°

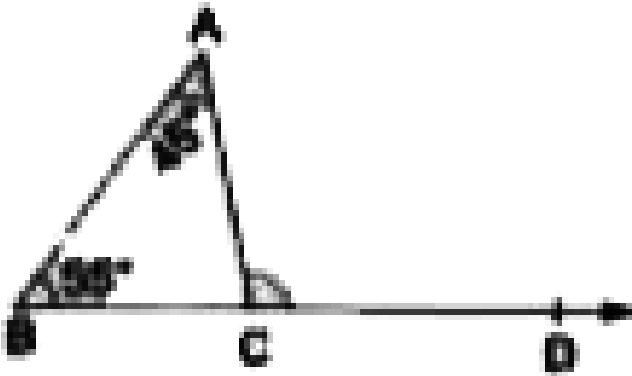
D. 58°

Answer: b



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16. In $\triangle ABC$, side BC has been produced to D . If $\angle BAC = 45^\circ$. And $\angle ABC = 55^\circ$, then $\angle ACD = ?$



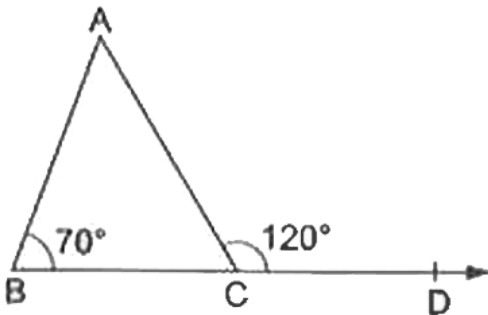
- A. 80°
- B. 90°
- C. 100°
- D. 110°

Answer: c



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17. In the given figure, side BC of $\triangle ABC$ is produced to D such that $\angle ABC = 70^\circ$ and $\angle ACD = 120^\circ$. Then, $\angle BAC = ?$



A. 60°

B. 50°

C. 70°

D. 35°

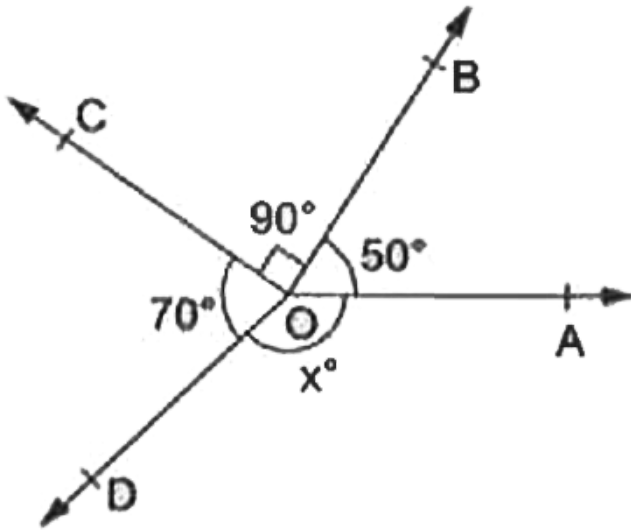
Answer: b



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18. In the given figure, rays OA, OB, OC and OD are such that $\angle AOB = 50^\circ$, $\angle BOC = 90^\circ$, $\angle COD = 70^\circ$ and $\angle AOD = x^\circ$. Then, the

value of x is



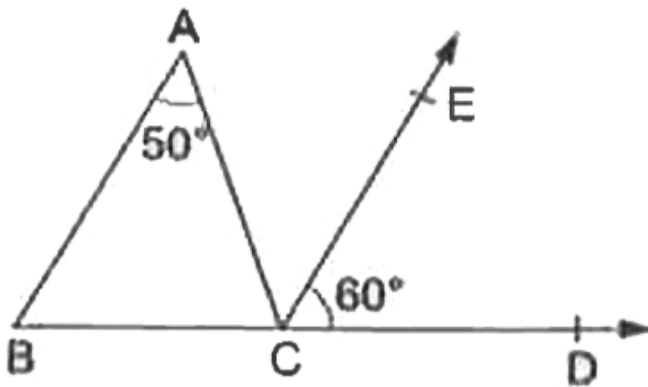
- A. 50°
- B. 70°
- C. 150°
- D. 90°

Answer: c



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19. In the given figure, $\angle A = 50^\circ$, $CE \parallel BA$ and $\angle ECD = 60^\circ$. Then, $\angle ZACB = ?$



A. 50°

B. 60°

C. 70°

D. 80°

Answer: c



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20. In $\triangle ABC$, if $\angle A = 65^\circ$ and

$\angle C = 85^\circ$, then $\angle B = ?$

A. 25°

B. 30°

C. 35°

D. 40°

Answer: B



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21. The sum of two angles of a triangle is 80° and their difference is 20° . Find all the angles.

A. 90°

B. 100°

C. 150°

D. 180°

Answer: d



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22. The sum of all angles of a quadrilateral is

A. 180°

B. 270°

C. 360°

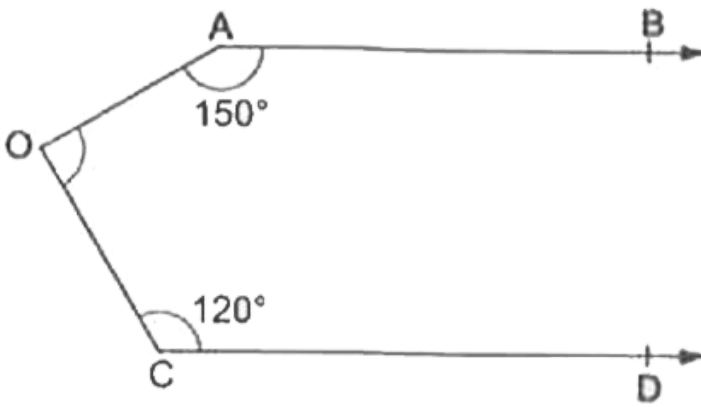
D. 480°

Answer: C



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23. In the given figure, $AB \parallel CD$, $\angle OAB = 150^\circ$ and $\angle OCD = 120^\circ$. Then, $\angle AOC = ?$



A. 80°

B. 90°

C. 70°

D. 100°

Answer: B



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24. In the given figure, $PQ \parallel RS$, $\angle PAB = 60^\circ$ and $\angle ACS = 100^\circ$. Then, $\angle BAC = ?$

A. 40°

B. 60°

C. 80°

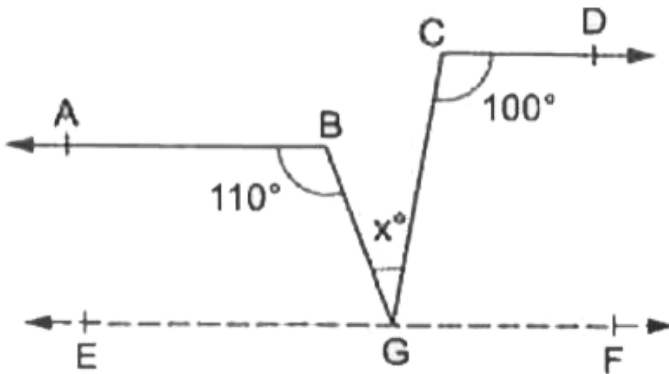
D. 50°

Answer: a



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25. In the given figure, $AB \parallel CD \parallel EF$, $\angle ABG = 110^\circ$, $\angle GCD = 100^\circ$ and $\angle BGC = x^\circ$. Then, $x =$?



- A. 35
- B. 50
- C. 30

D. 40

Answer: c



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26. Which of the following sentences are statements? In case of a statement mention whether it is true or false.

(i) The sun is a star.

(ii) $\sqrt{7}$ is an irrational number.

(iii) The sum of 5 and 6 is less than 10.

(iv) Go to your class.

(v) Ice is always cold.

(vi) Have you ever seen the Red Fort?

(vii) Every relation is a function.

(viii) The sum of any two sides of a triangle is always greater than the third side.

(ix) May God bless you!

A. equal to the third side

B. less than the third side

C. greater than or equal to the 3rd side

D. greater than the 3rd side

Answer: d



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27. The diagonals of a rhombus

A. are always equal

B. never bisect each other

C. always bisect each other at an acute angle

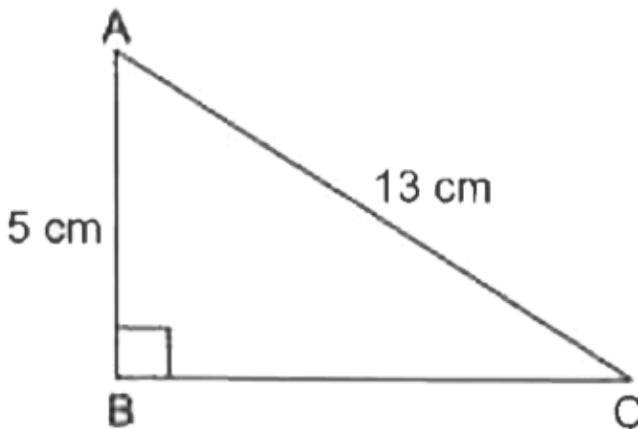
D. always bisect each other at right angles

Answer: d



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28. In $\triangle ABC$, $\angle B = 90^\circ$, $AB = 5\text{cm}$ and $AC = 13\text{cm}$. Then, $BC = ?$



A. 8 cm

B. 18 cm

C. 12 cm

D. none of these

Answer: c



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29. In a $\triangle ABC$ it is given that $\angle B = 37^\circ$ and

$\angle C = 29^\circ$. Then, $\angle A = ?$

A. 86°

B. 66°

C. 114°

D. 57°

Answer: c



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30. The angles of a triangle are in the ratio 2:3: 7. The measure of the largest angle is

A. 84°

B. 98°

C. 105°

D. 91°

Answer: c



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31. In a $\triangle ABC$, if $2 \angle A = 3 \angle B = 6 \angle C$, then $\angle B$

= ? `

A. 30°

B. 90°

C. 60°

D. 45°

Answer: c



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32. In a $\triangle ABC$, if $\angle A + \angle B = 65^\circ$ and $\angle B + \angle$

$C = 140^\circ$. Then, $\angle B = ?$

A. 25°

B. 35°

C. 40°

D. 45°

Answer: a



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33. In a $\triangle ABC$, $\angle A - \angle B = 33^\circ$ and $\angle B - \angle C = 18^\circ$. Then, $\angle B = ?$

A. 35°

B. 55°

C. 45°

D. 57°

Answer: b



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34. The angles of a triangle are $(3x)^\circ$, $(2x - 7)^\circ$ and $(4x - 11)^\circ$. Then, $x = ?$

A. 18

B. 20

C. 22

D. 30

Answer: c



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35. $\triangle ABC$ is right-angled at A. If $AB = 24$ cm and $AC = 7$ cm, then $BC = ?$

A. 31 cm

B. 17 cm

C. 25 cm

D. 28 cm

Answer: c



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36. A ladder is placed in such a way that its foot is a distance of 15 m from a wall and its top reaches a window 20m above the ground. Find the length of the ladder .

A. 35 m

B. 25 m

C. 18 m

D. 17.5 m

Answer: b



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37. Two poles of height 6m and 11m stand vertically upright on a plane ground. If the

distance between their foot is 12m, the distance between their tops is

A. 13 m

B. 14 m

C. 15 m

D. 12.8 m

Answer: a



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38. $\triangle ABC$ is an isosceles triangle with $\angle C = 90^\circ$ and $AC = 5$ cm. Then, $AB = ?$

A. 2.5 cm

B. 5 cm

C. 10 cm

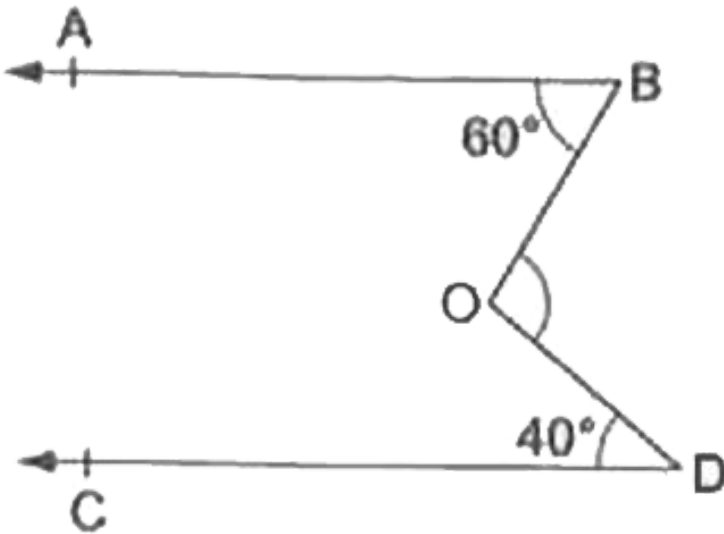
D. $5\sqrt{2}$ cm

Answer: d



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1. In the given figure, $AB \parallel CD$, $\angle ABO = 60^\circ$ and $\angle CDO = 40^\circ$. Then, find $\angle BOD$.



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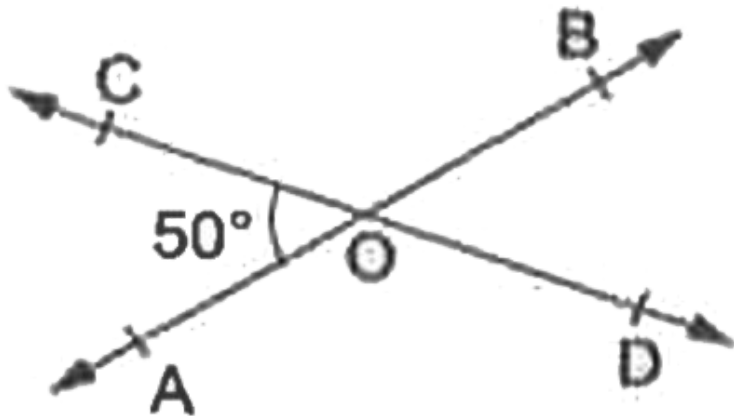
2. In the given figure, $CE \parallel BA$. If $\angle BAC = 70^\circ$ and $\angle ECD = 50^\circ$, find $\angle ACB$.



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3. In the given figure, two straight lines AB and CD intersect at a point such that $\angle AOC = 50^\circ$. Find: (i) $\angle BOD$

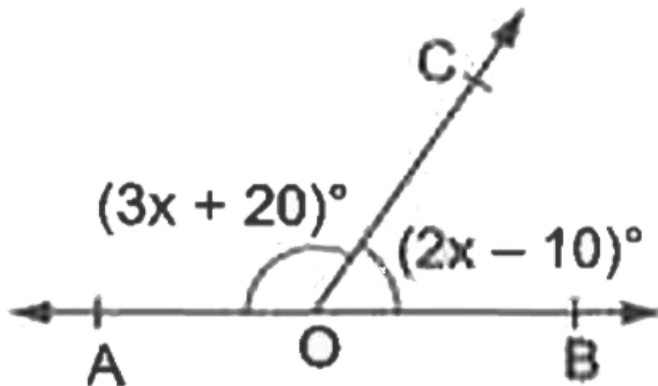
(ii) $\angle BOC$



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4. In the given figure, AOB is a straight line and OC is a ray such that $\angle AOC = (3x + 20)^\circ$ and $\angle BOC = (2x - 10)^\circ$. Find the value of x and hence find (i) $\angle AOC$

(ii) $\angle BOC$



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5. In a $\triangle ABC$, if $\angle A = 65^\circ$, $\angle B = 45^\circ$,
find $\angle C$.

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6. In the given figure, $x:y = 2:3$ and

$\angle ACD = 120^\circ$. Find the values of x , y and z .



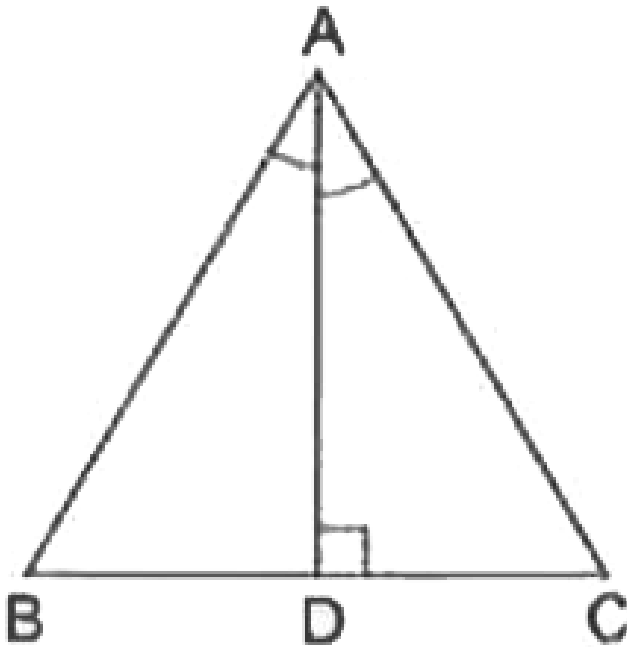
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7. Two legs of a right triangle are 8 cm and 15 cm long. Find the length of the hypotenuse of the triangle.



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8. In the adjoining figure, ABC is a triangle in which AD is the bisector of $\angle A$. If $AD \perp BC$, show that $\triangle ABC$ is isosceles.



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1. The supplement of 35° is

A. 55°

B. 65°

C. 145°

D. 165°

Answer: c

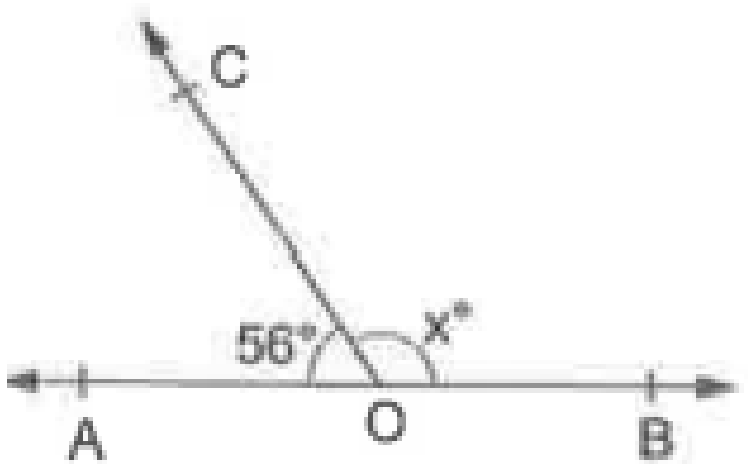


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2. In the given figure, AOB is a straight line,

$\angle AOC = 56^\circ$ and $\angle BOC = x^\circ$. The value of

x is



A. 34

B. 44

C. 144

D. 124

Answer: d



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3. In $\triangle ABC$, side BC has been produced to D such that $\angle ACD = 125^\circ$ and $\angle BAC = 60^\circ$. Then, $\angle ABC = ?$

A. 55°

B. 60°

C. 65°

D. 70°

Answer: c



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4. In a $\triangle ABC$, if $\angle B = 40^\circ$ and $\angle C = 35^\circ$,

then $\angle A = ?$

A. 50°

B. 55°

C. 105°

D. 150°

Answer: c



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5. In a $\triangle ABC$, if $2\angle A = 3\angle B = 6\angle C$, then

$\angle B = ?$

A. 30°

B. 45°

C. 60°

D. 90°

Answer: c



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6. In a $\triangle ABC$, if $A - B = 33^\circ$ and

$B - C = 18^\circ$, then $\angle B = ?$

A. 35°

B. 55°

C. 45°

D. 57°

Answer: b



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7. $\triangle ABC$ is an isosceles right triangle in which $\angle A = 90^\circ$ and $BC = 6$ cm. Then $AB = ?$

A. $2\sqrt{2}$ cm

B. $3\sqrt{2}cm$

C. $4\sqrt{2}cm$

D. $2\sqrt{3}cm$

Answer: b



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Test Paper Fill In The Blanks

1. The sum of the angles of a triangle is



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2. The sum of any two sides of a triangle is always than the third side.



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3. In a $\triangle ABC$, if $\angle A = 90^\circ$, then $BC^2 =$
(.....) + (.....).



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4. In a $\triangle ABC$, $AB = AC$ and $AD \perp BC$, then

$BD = \dots\dots$



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5. In the given figure, side BC of $\triangle ABC$ is produced to D and $CE \parallel BA$. If $\angle BAC = 50^\circ$, then $\angle ACE = \dots\dots$



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1. If two parallel lines are cut by a transversal, then the alternate interior angles are equal

A. TRUE

B. FALSE

C. Cannot be determined

D. None of these

Answer: A



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2. If two lines intersect each other, then the vertically opposite angles are equal.



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3. Each acute angle of an isosceles right triangle measures 45° .



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4. A right triangle cannot have an obtuse angle.



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