

## Lines \& Angles Questions for CDS, SSC \& Railways Exams

## Lines \& Angles Quiz 1

Directions: Kindly study the following questions carefully and choose the right answer:

1. An angle which is greater than $180^{\circ}$ but less than $360^{\circ}$ is called:
A. An actue angle
B. An obtuse angle
C. An adjacent angle
D. A reflex angle
2. The complement of $72^{\circ} 40^{\prime}$ is:
A. $107^{\circ} 20^{\prime}$
B. $27^{\circ} 20^{\prime}$
C. $17^{\circ} 20^{\prime}$
D. $12^{\circ} 40^{\prime}$
3. The supplement of $154^{\circ} 30^{\prime}$ is:
A. $25^{\circ} 30^{\prime}$
B. $44^{\circ} 45^{\prime}$
C. $158^{\circ} 45^{\prime}$
D. $168^{\circ} 30^{\prime}$
4. Two straight lines $A B$ and $C D$ cut each other at $O$. If $\angle B O D=63^{\circ}$, then $\angle B O C$ is:
A. $63^{\circ}$
B. $117^{\circ}$
C. $17^{\circ}$
D. $153^{\circ}$
5. The straight lines $A D$ and $B C$ intersect one another at the point $O$.

If $\angle A O B+\angle B O D+\angle D O C=274^{\circ}$, then $\angle A O C$ is:
A. $86^{\circ}$
B. $90^{\circ}$
C. $94^{\circ}$
D. $137^{\circ}$
6. In the given figure, $A O B$ is a straight line. If $\angle A O C+\angle B O D=85^{\circ}$, then $\angle C O D$ is:
A. $85^{\circ}$
B. $90^{\circ}$
C. $95^{\circ}$

D. $100^{\circ}$
7. In the given figure, if $A O B$ is a straight line, then the value of $x$ is:
A. $90^{\circ}$
B. $45^{\circ}$

C. $22.5^{\circ}$
D. $150^{\circ}$
8. In the given figure, the value of $x$, that would make POQ a straight line, is:
A. $50^{\circ}$
B. $44^{\circ}$
C. $34^{\circ}$

D. $33^{\circ}$
9. If two angles are complementary of each other, then each angle is:
A. An obtuse angle
B. A right angle
C. An acute angle

D. A supplementary angle
10. In the given figure, if $A B|\mid C D$, then $\angle F X E$ is equal to:
A. $30^{\circ}$
B. $50^{\circ}$
C. $70^{\circ}$
D. $80^{\circ}$

## Correct Answers:

| $\mathbf{1}$ | $\mathbf{2}$ | $\mathbf{3}$ | $\mathbf{4}$ | $\mathbf{5}$ | $\mathbf{6}$ | $\mathbf{7}$ | $\mathbf{8}$ | $\mathbf{9}$ | $\mathbf{1 0}$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| D | C | A | B | A | C | B | C | C | D |

## Explanations:

1. 

An angle which is greater than $180^{\circ}$ but less than $360^{\circ}$ is called a reflex angle.

Hence, option D is correct.
2.

Complement of $72^{\circ} 40^{\prime}$ is $90^{\circ}-\left(72^{\circ} 40^{\prime}\right)$
$=\left(89^{\circ} 60^{\prime}\right)-\left(72^{\circ} 40^{\prime}\right)\left\{\right.$ since $\left.1^{\circ}=60^{\prime}\right\}$
$=17^{\circ} 20^{\prime}$

Hence, option C is correct.
3.

Supplement of $154^{\circ} 30^{\prime}$ is $180^{\circ}-\left(154^{\circ} 30^{\prime}\right)$
$=\left(179^{\circ} 30^{\prime}\right)-\left(154^{\circ} 30^{\prime}\right)\left\{\right.$ since $\left.1^{\circ}=60^{\prime}\right\}$
$=25^{\circ} 30^{\prime}$.

Hence, option A is correct.
4.

As given $\angle B O D=63^{\circ}$
Since COD is a straight line, we have:
$\angle B O C+\angle B O D=180^{\circ}$. So, $\angle B O C=\left(180^{\circ}-63^{\circ}\right)=117^{\circ}$.


Hence, option B is correct.
5.

As we know that the sum of all the angles around a point is $360^{\circ}$.
$(\angle A O B+\angle B O D+\angle D O C)+\angle A O C=360^{\circ}$
$\therefore 274^{\circ}+\angle A O C=360^{\circ}$ or $\angle A O C=86^{\circ}$.


Hence, option A is correct.
6.

Clearly,
$\angle A O C+\angle C O D+\angle B O D=180^{\circ}$
$\therefore 85^{\circ}+\angle C O D=180^{\circ}$. So, $\angle C O D=\left(180^{\circ}-85^{\circ}\right)=95^{\circ}$.
Hence, option C is correct.
7.

As, $\left(x+30^{\circ}\right)+45^{\circ}+\left(x+15^{\circ}\right)=180^{\circ}$
$\Rightarrow \mathrm{x}=45^{\circ}$.
Hence, option B is correct.
8.

POQ will be a straight line,
If $80^{\circ}+66^{\circ}+x=180^{\circ}$, i.e. $x=34^{\circ}$.
Hence, option C is correct.
9.

If two angles are complementary, then clearly each angle is less than $90^{\circ}$ and is therefore an acute angle.

Hence, option C is correct.
10.

As per the given figure,
$\angle \mathrm{BFE}=\angle \mathrm{CEF}=110^{\circ}$ (alt. $\angle \mathrm{s}$ ).
So, $\angle \mathrm{XFE}=\angle \mathrm{BFE}-\angle \mathrm{BFX}=\left(110^{\circ}-50^{\circ}\right)=60^{\circ}$.
And on straight line CD,
$110^{\circ}+\angle F E X+30^{\circ}=180^{\circ} \Rightarrow \angle F E X=40^{\circ}$.
Now, $\angle X F E+\angle F E X+\angle F X E=180^{\circ} \Rightarrow 60^{\circ}+40^{\circ}+\angle F X E=180^{\circ}$.
$\therefore \angle \mathrm{FXE}=80^{\circ}$.
Hence, option D is correct.

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