

Circle Theorems

C is the centre of the circle, all other points are on the circumference.
All the angles are less than 180° .

$$A\hat{D}B = 20^\circ$$

What is $A\hat{C}B$?

$$A\hat{B}C = 20^\circ$$

What is $A\hat{C}B$?

$$A\hat{C}B = 20^\circ$$

What is $A\hat{B}C$?

$$A\hat{B}C = 20^\circ$$

What is $A\hat{D}B$?

$$A\hat{D}B = 20^\circ$$

What is $A\hat{B}C$?

$$A\hat{D}B = 90^\circ$$

What is $A\hat{E}B$?

$$A\hat{D}B = 20^\circ$$

What is $A\hat{E}B$?
(2 answers)

$$A\hat{C}B = 20^\circ$$

What is $A\hat{D}B$?
(2 answers)

Circle Theorems

C is the centre of the circle, all other points are on the circumference.
All the angles are less than 180° .

Ratio

\widehat{ADB} and \widehat{AEB} are
in the ratio $2 : 7$.

What is \widehat{ADB} ?

Equations

\widehat{ABC} is 10° greater
than \widehat{ADB} .

What is \widehat{ABC} ?

Percentages

\widehat{ABC} is 25% of the
size of \widehat{ACB} .

What is \widehat{ABC} ?

Averages

The mean of \widehat{ACB}
and \widehat{ADB} is 24° .

What is \widehat{ADB} ?

Sequences

The angles of
quadrilateral $ABDE$ form
an arithmetic sequence.
The smallest angle is 45° .

What is the second
smallest angle?

Bounds

\widehat{ACB} is 30° ,
to the nearest 10° .

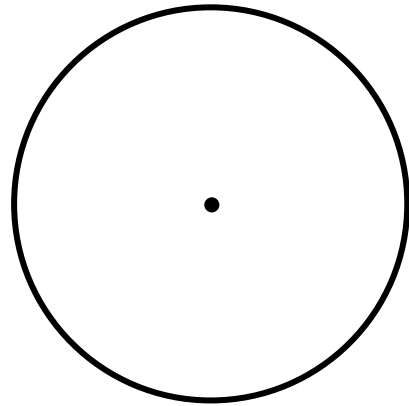
What is the range of
possible values for \widehat{ADB} ?

Circle Theorems

C is the centre of the circle, all other points are on the circumference.
All the angles are less than 180° .

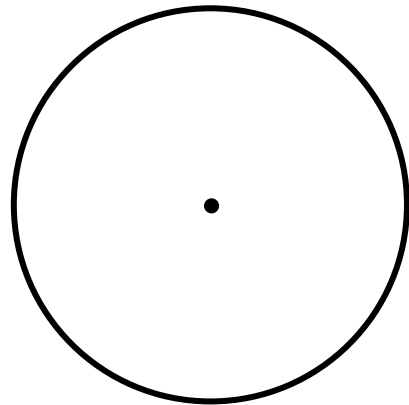
$$\widehat{ADB} = 20^\circ$$

What is \widehat{ACB} ?



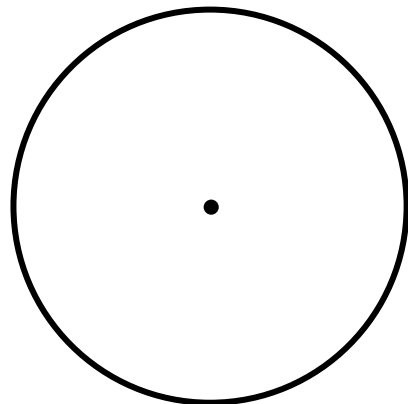
$$\widehat{ACB} = 20^\circ$$

What is \widehat{ABC} ?



$$\widehat{ADB} = 20^\circ$$

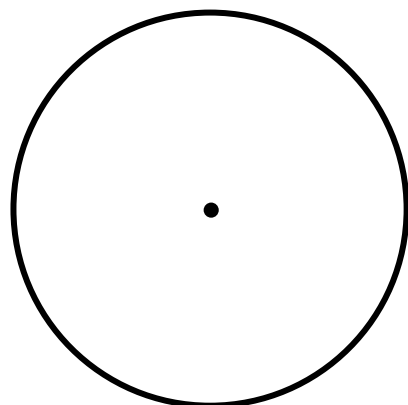
What is \widehat{ABC} ?



$$\widehat{ADB} = 20^\circ$$

What is \widehat{AEB} ?

(2 answers)

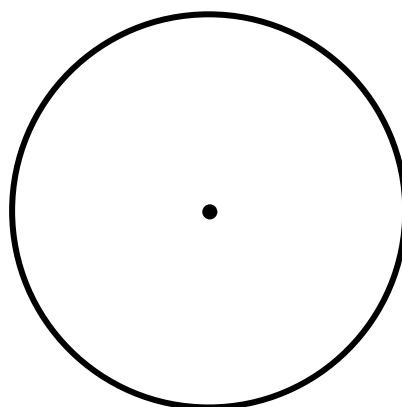


Circle Theorems

C is the centre of the circle, all other points are on the circumference.
All the angles are less than 180° .

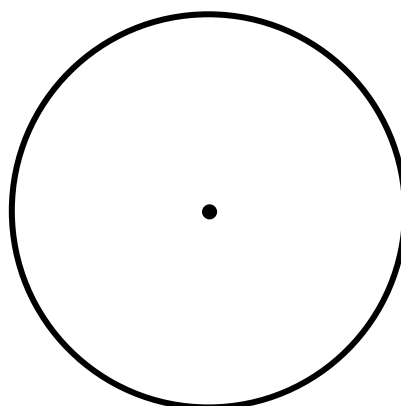
$$\hat{A}BC = 20^\circ$$

What is $\hat{A}CB$?



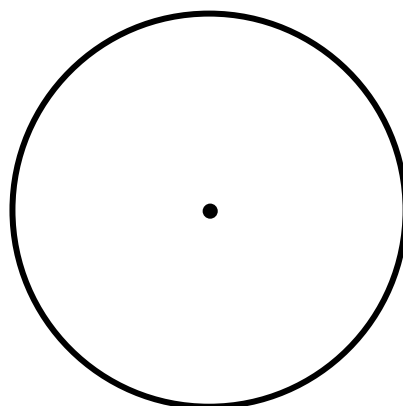
$$\hat{A}BC = 20^\circ$$

What is $\hat{A}DB$?



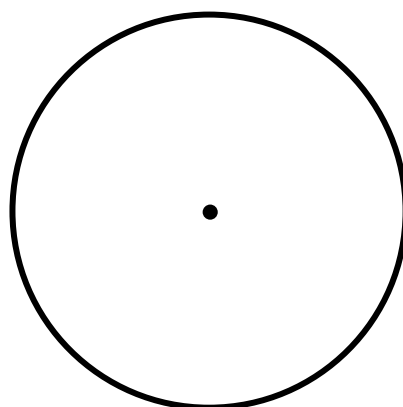
$$\hat{A}DB = 90^\circ$$

What is $\hat{A}EB$?



$$\hat{A}CB = 20^\circ$$

What is $\hat{A}DB$?
(2 answers)



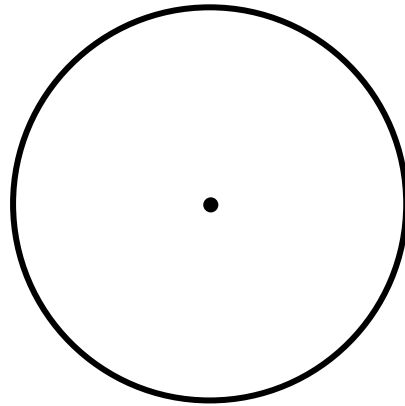
Circle Theorems

C is the centre of the circle, all other points are on the circumference.
All the angles are less than 180° .

Ratio

\widehat{ADB} and \widehat{AEB} are
in the ratio $2 : 7$.

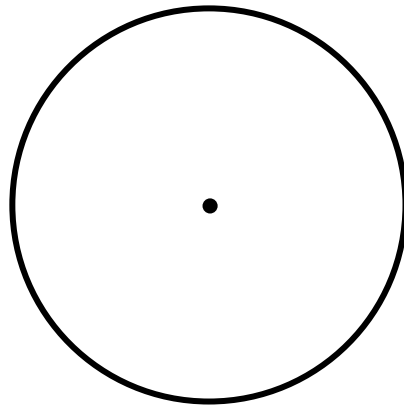
What is \widehat{ADB} ?



Percentages

\widehat{ABC} is 25% of the
size of \widehat{ACB} .

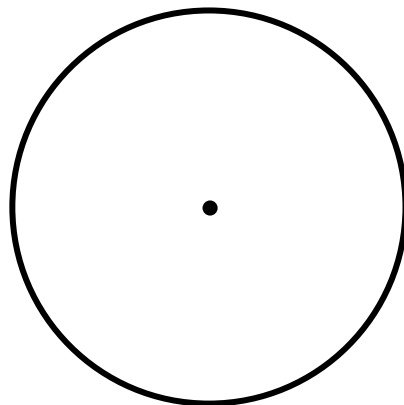
What is \widehat{ABC} ?



Sequences

The angles of
quadrilateral $ABDE$ form
an arithmetic sequence.
The smallest angle is 45° .

What is the second
smallest angle?



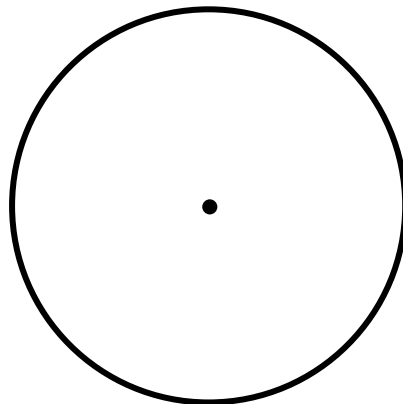
Circle Theorems

C is the centre of the circle, all other points are on the circumference.
All the angles are less than 180° .

Equations

$\hat{A}BC$ is 10° greater than $\hat{A}DB$.

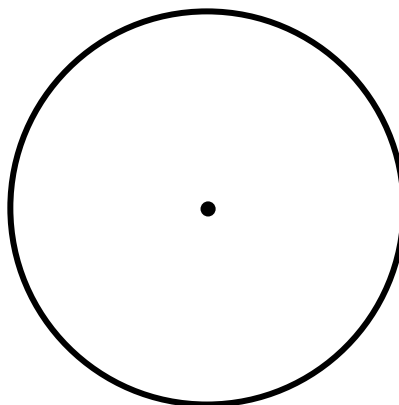
What is $\hat{A}BC$?



Averages

The mean of $\hat{A}CB$ and $\hat{A}DB$ is 24° .

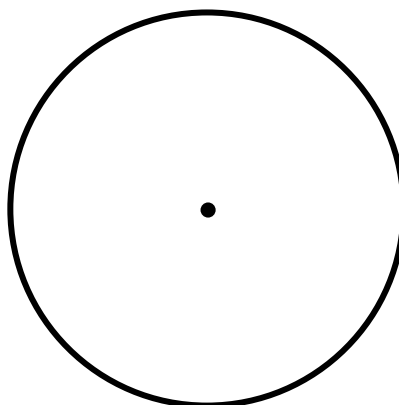
What is $\hat{A}DB$?



Bounds

$\hat{A}CB$ is 30° ,
to the nearest 10° .

What is the range of possible values for $\hat{A}DB$?



Circle Theorems

C is the centre of the circle, all other points are on the circumference.
All the angles are less than 180° .

$$A\hat{D}B = 20^\circ$$

What is $A\hat{C}B$?

$$40^\circ$$

$$A\hat{C}B = 20^\circ$$

What is $A\hat{B}C$?

$$80^\circ$$

$$A\hat{D}B = 20^\circ$$

What is $A\hat{B}C$?

$$70^\circ$$

$$A\hat{D}B = 20^\circ$$

What is $A\hat{E}B$?

(2 answers)

$$20^\circ \text{ or } 160^\circ$$

Circle Theorems

C is the centre of the circle, all other points are on the circumference.
All the angles are less than 180° .

$$\widehat{ABC} = 20^\circ$$

What is \widehat{ACB} ?

$$140^\circ$$

$$\widehat{ABC} = 20^\circ$$

What is \widehat{ADB} ?
(2 answers)

$$70^\circ \text{ or } 110^\circ$$

$$\widehat{ADB} = 90^\circ$$

What is \widehat{AEB} ?

$$90^\circ$$

$$\widehat{ACB} = 20^\circ$$

What is \widehat{ADB} ?
(2 answers)

$$10^\circ \text{ or } 170^\circ$$

Circle Theorems

C is the centre of the circle, all other points are on the circumference.
All the angles are less than 180° .

Ratio

\widehat{ADB} and \widehat{AEB} are
in the ratio $2 : 7$.

What is \widehat{ADB} ?

40°

Percentages

\widehat{ABC} is 25% of the
size of \widehat{ACB} .

What is \widehat{ABC} ?

30°

Sequences

The angles of
quadrilateral $ABDE$ form
an arithmetic sequence.
The smallest angle is 45° .

What is the second
smallest angle?

105°

Circle Theorems

C is the centre of the circle, all other points are on the circumference.
All the angles are less than 180° .

Equations

$\hat{A}BC$ is 10° greater
than $\hat{A}DB$.

What is $\hat{A}BC$?

50°

Averages

The mean of $\hat{A}CB$
and $\hat{A}DB$ is 24° .

What is $\hat{A}DB$?

16°

Bounds

$\hat{A}CB$ is 30° ,
to the nearest 10° .

What is the range of
possible values for $\hat{A}DB$?

$12.5^\circ \leq \theta < 17.5^\circ$
or
 $172.5 < \theta \leq 177.5$