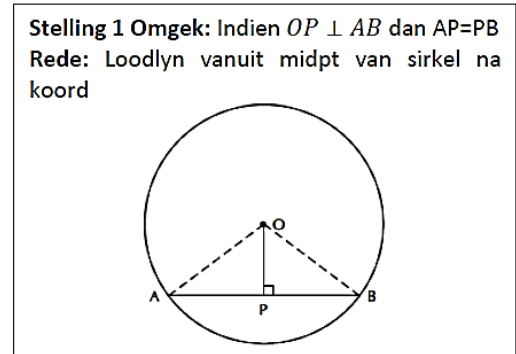
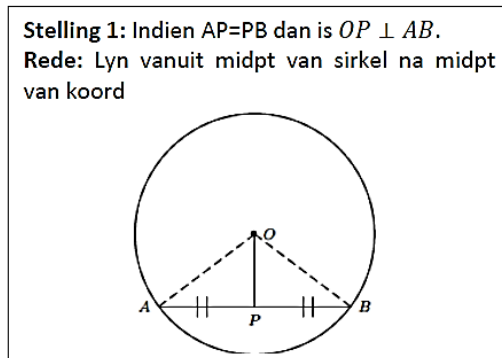


# SIRKELMEETKUNDE (EUKLIDIESE MEETKUNDE) GRAAD 11

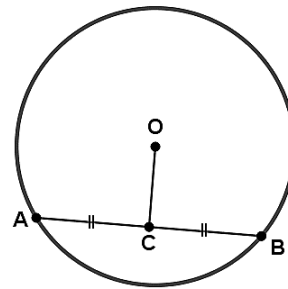
## WERKVEL 1

### STELLINGS:

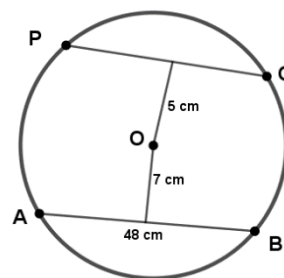


### OEFENING 1

1. As  $OC = 8$  cm en  $AB = 30$  cm, vind met redes die lengte van radius  $AO$ .

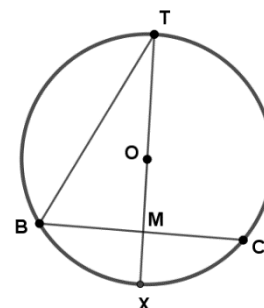


2. In die sirkel is  $O$  die middelpunt van die sirkel. Bereken met redes die lengte van  $PQ$ .



3.  $TOMX$  is 'n middellyn van 'n sirkel met middelpunt  $O$  en koord  $BC = 30$  cm. As  $TOMX \perp BC$  en  $OM = 2 MX$ , bereken met redes:

- a)  $TB$   
 b) die radius vd sirkel

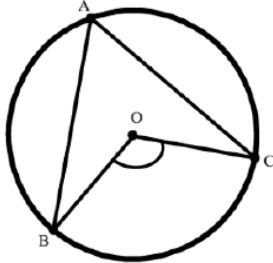


## WERKVEL 2

### STELLINGS:

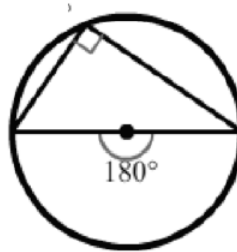
**Stelling 2:**  $\widehat{BOC} = 2 \times \widehat{A}$ .

**Rede:** Midpts  $\angle = 2 \times$  Omtreks  $\angle$



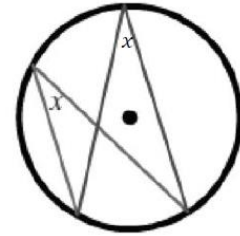
**Stelling 3:**

**Rede:**  $\angle$  in  $\frac{1}{2}$  sirkel



**Stelling 4:**

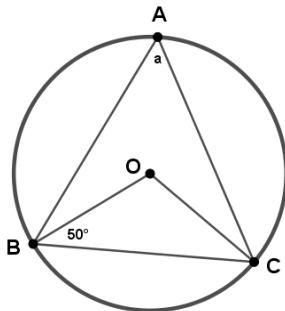
**Rede:** Omtreks  $\angle e$  in dies sirkel segment



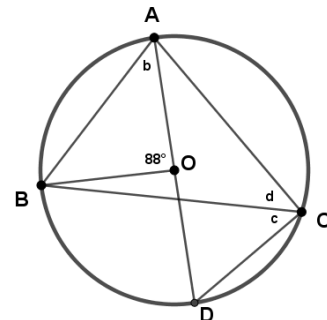
### OEFENING 2

1. Bepaal die waardes van die letters in elk van die volgende sirkels. O is in elke sirkel die middelpunt.

1.1



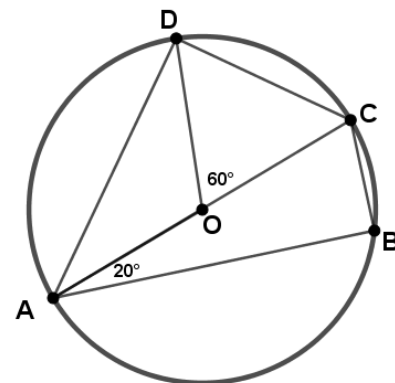
1.2



2. O is die middelpunt van die sirkel en  $\widehat{DOC} = 60^\circ$  en  $\widehat{CAB} = 20^\circ$ . AC is die middellyn van die sirkel. Bereken met redes die grootte van:

2.1  $\widehat{DCO}$

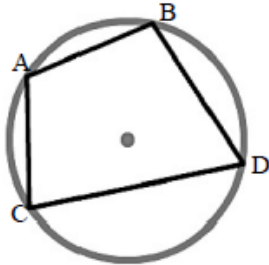
2.2  $\widehat{BCA}$



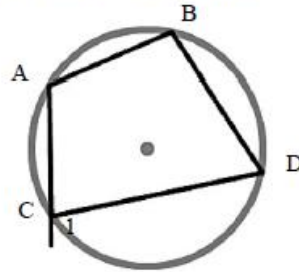
## WERKVEL 3

### STELLINGS

Stelling 5:  $\widehat{B} + \widehat{C} = 180^\circ$  en  $\widehat{A} + \widehat{D} = 180^\circ$   
 Rede: Teenoorst  $\angle$ e van koordevierhoek



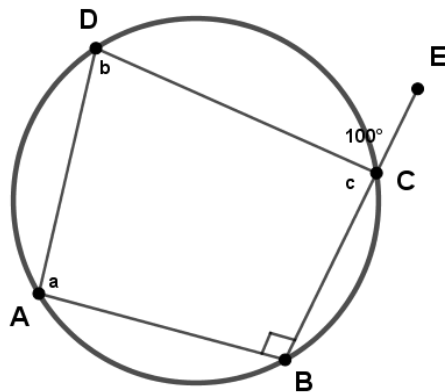
Stelling 6:  $\widehat{C}_1 = \widehat{B}$   
 Rede: Buite  $\angle$  van koordevierhoek



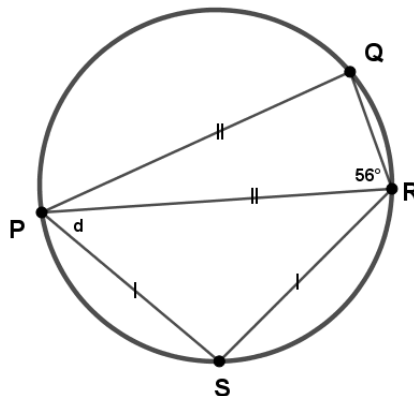
### OEFENING 3

Vind met redes die waardes van die letters in elk van die volgende sirkels.

1.



2.

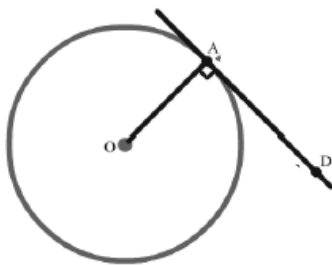


# WERKVEL 4

## STELLINGS

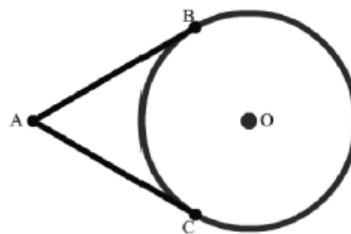
**Stelling 7:**

Rede: Radius  $\perp$  raaklyn



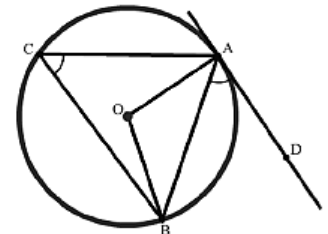
**Stelling 8:  $AB = AC$**

Rede: Raaklyne vanuit dies punt



**Stelling 9:  $\hat{D}AB = \hat{C}$**

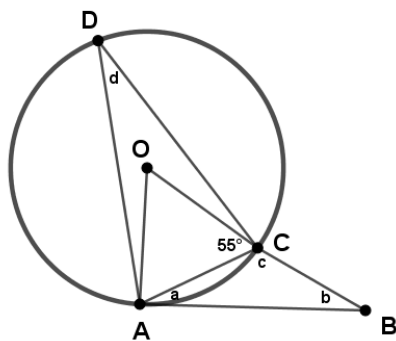
Rede:  $\angle$  ts raaklyn en koord



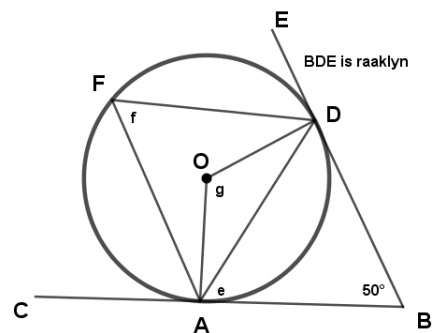
## OEFENING 4

1. In elk van die volgende sirkels is O die middelpunt van die sirkel en lyn AB is 'n raaklyn. Bepaal met redes die waardes van die letters.

1.1

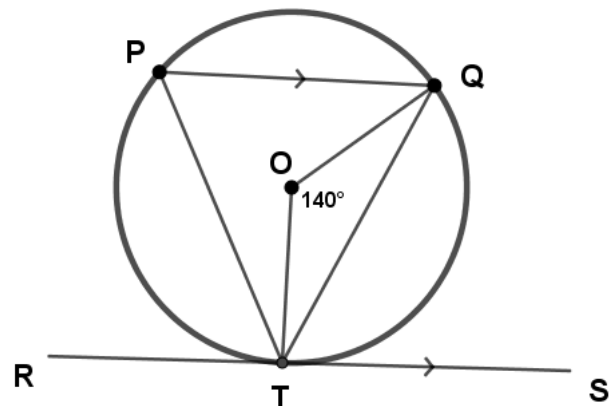


1.2



2. In die sirkel is O die middelpunt,  $PQ \parallel RS$  en lyn RS is 'n raaklyn aan die sirkel by punt T. Verder is  $\hat{O}_1 = 140^\circ$ .  
Bereken, met redes:

- 2.1  $\hat{P}$
- 2.2  $Q\hat{T}S$
- 2.3  $P\hat{T}O$

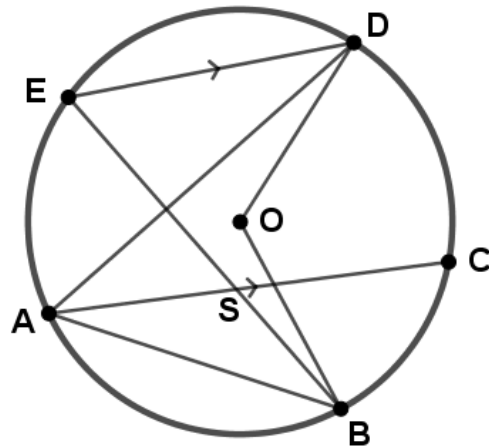


## WERKVEL 5

### OEFENING 5 (gemengde somme)

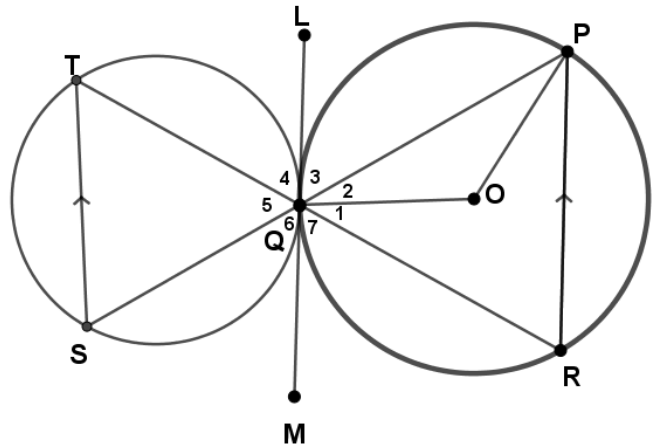
1. O is die middelpunt van die sirkel.  
 CA halveer  $\widehat{DAB}$  en  $\widehat{BOD} = 112^\circ$ .  
 Bereken die grootte van:

- 1.1  $\widehat{BAS}$   
 1.2  $\widehat{ADE}$



2. O is die middelpunt van sirkel PQR. LM is 'n gemene raaklyn aan beide sirkels by die punt Q.  $PQ = RP$  en  $RP \parallel TS$ . Bereken, met redes:

- 2.1  $\widehat{Q}_1$   
 2.2  $\widehat{Q}_3$   
 2.3  $\widehat{T}$   
 2.4  $\widehat{Q}_7$   
 2.5  $\widehat{R}$



3. AC en AD is reguitlyne.  
 $\widehat{D} = 58^\circ$

- 3.1 Bereken  $\widehat{BEA}$   
 3.2 Watter soort vierhoek is BCDE? Gee 'n rede.  
 3.3 Bereken vervolgens:  
 3.3.1  $\widehat{EBC}$   
 3.3.2  $\widehat{A}$

