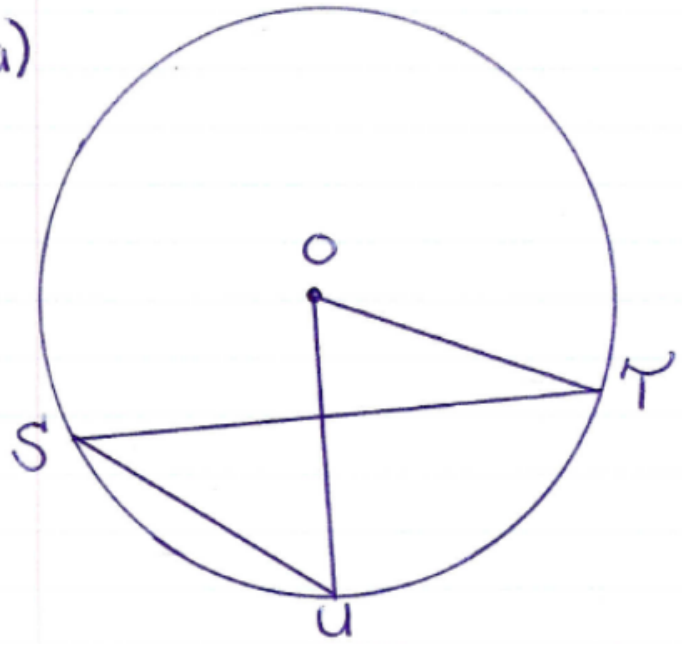
1a)



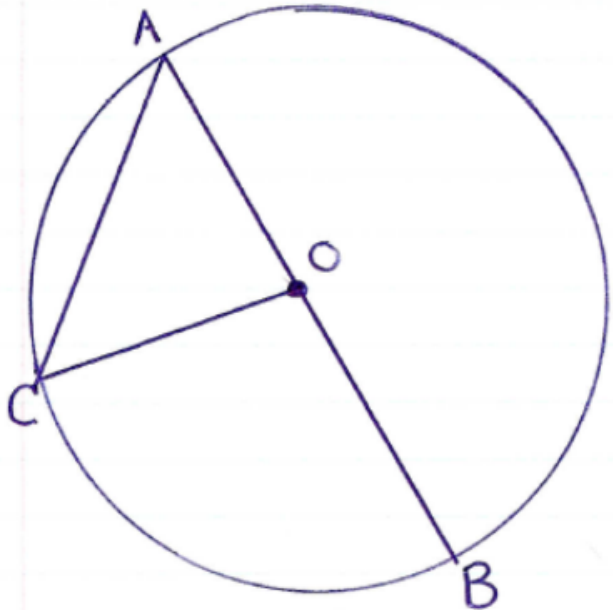
Inscribed

$\angle TSU$

Central

$\angle UOT$

b)



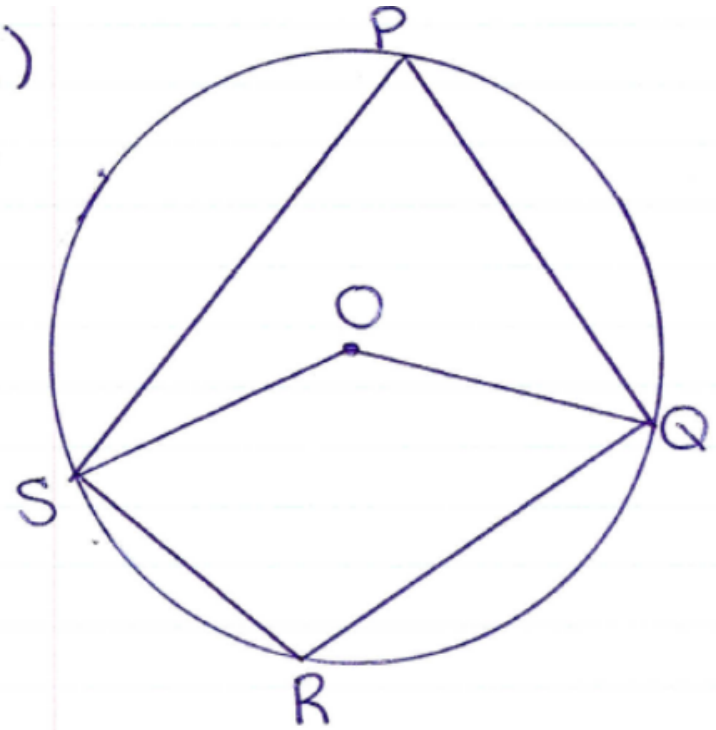
Inscribed

$\angle CAB$

Central

$\angle COB$
$\angle AOC$

c)



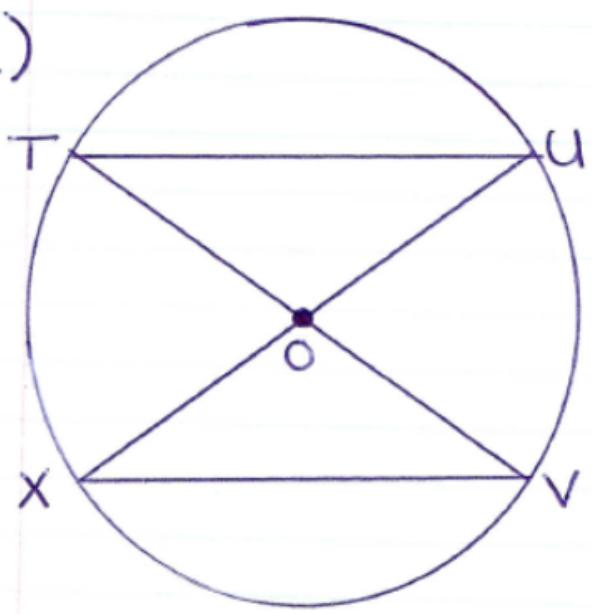
Inscribed

∠SPQ
∠PSR
∠SRQ
∠PQR

Central

∠SOQ

d)



Inscribed

< TUX
< TVX
< UTV
< UXV

Central

< TOU < TOX
< XOV < UOV

2a) $\angle P$ and $\angle A$ are equal.

b) $\angle P + \angle A = 180°$

c) $\angle P = 2\angle A$ or $\angle A = \frac{1}{2}\angle P$

d) $\angle P$ and $\angle A$ are equal.

3.

a) $\angle A = \angle B$ because they are both inscribed angles drawn from arc **TS**

$m = 42°$

b) PQ is a diameter
$\angle S = 90°$

4a) Central Angle = $2(20°)$
$= 40°$

b) Central Angle = $2(40°)$
$= 80°$

c) Central Angle = $2(80°)$
$= 160°$

5a) Inscribed Angle = $\frac{80°}{2}$
$= 40°$

b) Inscribed Angle = $\frac{50°}{2}$
$= 25°$

c) Inscribed Angle = $\frac{110°}{2}$
$= 55°$

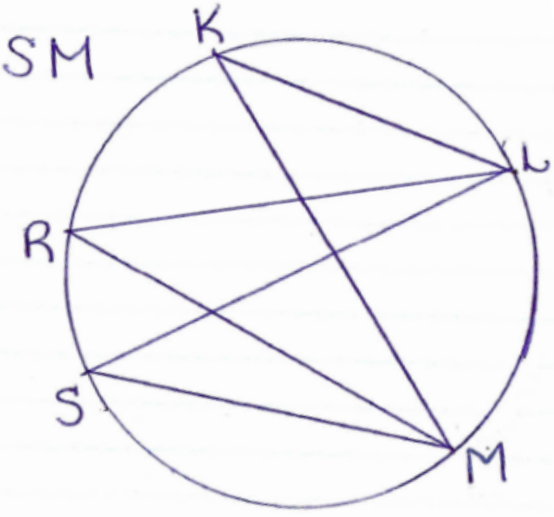
6.a) $< BAD = < BCD \Rightarrow 90°$

b) $< LKM = < LRM = < LSM$

$< KLS = < KMS$

$< RLS = < RMS$

$< KLR = < KMR$



7a) $a° = 2(40°)$

$a° = 80°$

* The measure of the central angle in a circle is <u>twice</u> the inscribed angle drawn from the same arc.

b) $b° = \frac{160°}{2}$

$= 80°$

*

The measure of the inscribed angle in a circle is <u>half</u> of the central angle drawn from the same arc.

8a) $x° = 40°$
$y° = 50°$

* Inscribed angles drawn from the same arc are equal.

b) $p° = 90°$
$q° = 90°$

* Inscribed angles drawn from a diameter are 90°.

9a) $x^\circ = 180^\circ - 106^\circ$
$x^\circ = 74^\circ$

$y^\circ = 180^\circ - 85^\circ$
$y^\circ = 95^\circ$

* Opposite angles in an inscribed quadrilateral are supplementary.

b) $p^\circ = 28^\circ$
$q^\circ = 38^\circ$

* Inscribed angles drawn from the same arc are equal.

c) $m^\circ = \frac{90^\circ}{2}$
$m^\circ = 45^\circ$

* The inscribed angle is half of the central angle drawn from the same arc.

d) $f° = 90°$

* Inscribed angles drawn from a diameter are 90°

e) $b° = 180° - 102°$ $\quad a° = 180° - 76°$

$b° = 78°$ $\quad a° = 104°$

* Opposite angles in an inscribed quadrilateral are supplementary.

f) $s° = 42°$

$t° = 56°$

* Inscribed angles drawn from the same arc are equal.

10.a) $y^\circ = 2(30^\circ)$

$y^\circ = 60^\circ$

* The central angle will be twice the inscribed angle when drawn from the same arc

b) Since $\angle P = 90^\circ$, (Inscribed angle drawn on a diameter)

$x^\circ = 180^\circ - 90^\circ - 40^\circ$

$x^\circ = 50^\circ$ (Angle sum of a triangle.)

c) $x^\circ = \frac{140^\circ}{2}$

$x^\circ = 70^\circ$

* The inscribed angle will be half of the central angle when drawn from the same arc.

d) $x° = 28°$ } * Inscribed angles drawn from the
$y° = 42°$ } same arc will be equal.

$K° = S° \Rightarrow 180° - 42° - 28°$ } Angle sum
$= 110°$ } of a triangle.

$K° = 110°$
$S° = 110°$

e) $p° = 29°$ } * Inscribed angles drawn from
$K° = 48°$ } the same arc will be equal.

$q° = 180° - 29° - 48°$
$q° = 103°$ (Angle sum of a triangle)

f) $y° = 180° - 46°$
$y° = 134°$

* Opposite angles in an inscribed quadrilateral are supplementary.

$x° = 180° - 20° - 134°$
$x° = 26°$ (Angle sum of a triangle)