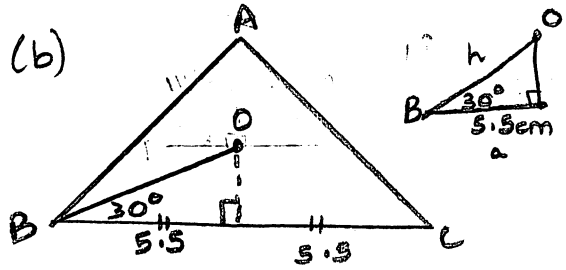
Circle 1 - Solutions

F) Area CDE $\Rightarrow \frac{x}{360} \times \pi r^2 = \frac{110}{360} \times \pi \times 12.5^2 = 149.99\,cm^2$

G) (a) OBC = 30° (60° ÷ 2) Equilateral triangle

(b)



SOH CAH TOA

$\cos 30° = \frac{5.5}{h}$ ×h ×h

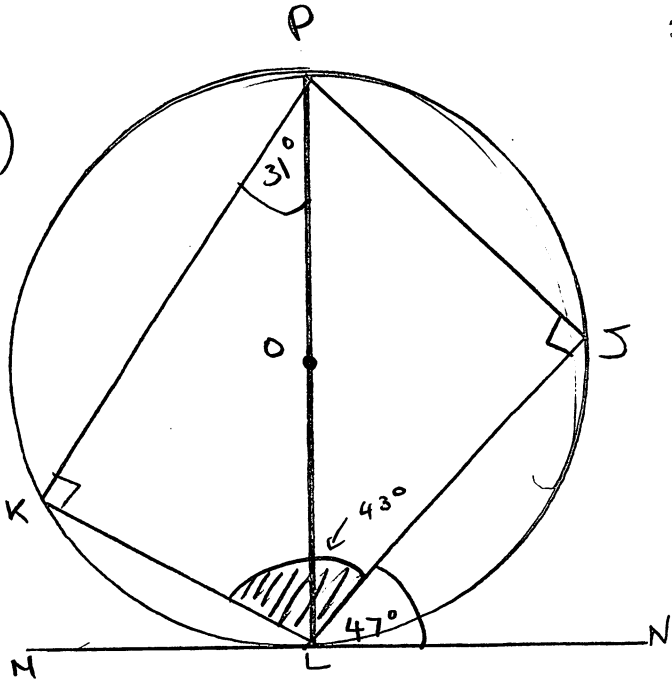
$h\cos 30° = 5.5$

÷cos30 ÷cos30

$h = 6.35cm$

⇒ Radius = 6.35cm

D)

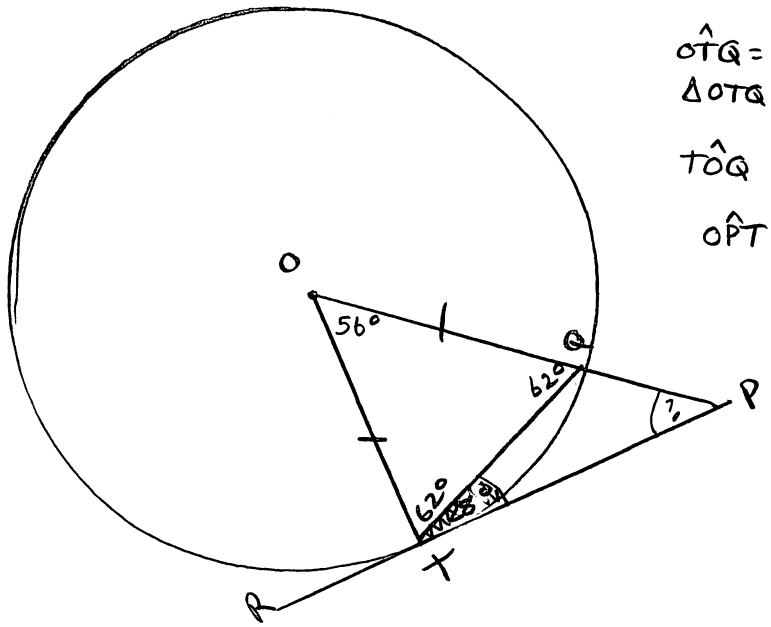


$P\hat{L}J = 90° - 47° = 43°$

$P\hat{L}K = 180° - (90° + 31°)$
$= 180° - 121°$
$= 59°$

$K\hat{L}J = 59° + 43° = 102°$

E)

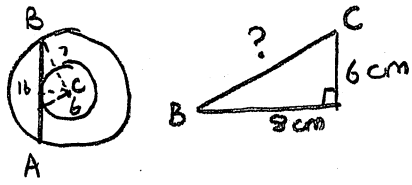


$O\hat{T}Q = 90° - 28° = 62°$
ΔOTQ Isosceles (radius)

$T\hat{O}Q = 180° - (62° + 62°) = 56°$

$O\hat{P}T = 180° - (90° + 56°)$
$= 180° - 146° = 34°$

B)



Pythagoras $\Rightarrow ?^2 = 6^2 + 8^2$

$= 36 + 64$

$= 100$

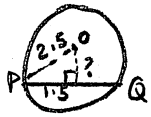
$BC = \sqrt{100} = 10cm$

C) Distance = arc length

$\frac{x}{360} \times \pi D \Rightarrow$ rather than $\frac{x}{360}$ use $\frac{7}{16}$

$\frac{7}{16} \times \pi \times 18 = 24.74m$

A)



Pythagoras: $?^2 = 2.5^2 - 1.5^2$

$= 6.25 - 2.25$

$?^2 = 4$

$? = \sqrt{4} = 2m$

d = Radius − 2

$= 2.5 - 2 = 0.5m$