2) $\bar{X} = \sum_{i=1}^{4} \frac{x_i n_i}{N}$

$= \frac{37(5) + 38(22) + 41(17) + 42(36)}{80}$

$\bar{X} = \frac{185 + 836 + 697 + 1512}{80}$

$= \frac{3230}{80} = 40.375$

4th exercise:

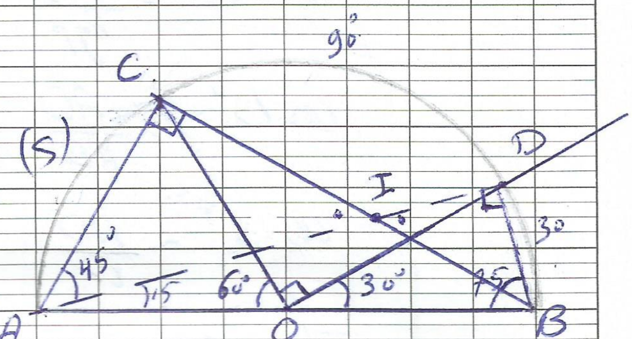
1a) [AB] is a diameter of (S).

So, $mes(\widehat{AC} + \widehat{CB}) = 180^\circ$

but, $mes\ \widehat{BC} = 2\ mes\ \widehat{AC}$ (given)

So, $mes(\widehat{AC} + 2\widehat{AC}) = 180^\circ$

Thus $mes\ \widehat{AC} = \frac{180^\circ}{3} = 60^\circ$



b) $\hat{AOC} = mes(\widehat{AC})$ (central angle intercepting $\widehat{AC}$)

$= 60^\circ$;

$\hat{AOB} = 180^\circ$ (central angle held by the diameter)

$\hat{AOB} = \hat{AOC} + \hat{COD} + \hat{DOB}$

$180^\circ = 60^\circ + 90^\circ + \hat{DOB}$

hence $\hat{DOB} = 30^\circ$

but $mes\ \widehat{DB} = \hat{DOB}$ (mes of arc held by a central angle)

Thus, $mes\ \widehat{DB} = 30^\circ$.

In $\triangle ABC$ we have:

C is a pt on (S) with diameter [AB] (given)

So, $\hat{ACB} = 90^\circ$ (inscribed angle facing diameter.

$\hat{AOC} = 60^\circ$ (proved)

Thus, $\triangle ABC$ is semi equilateral of vertex A.