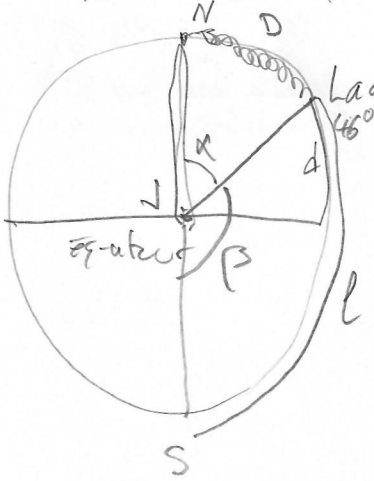
7.1 $R = 6370$ km



1) $360° \equiv 2\pi \cdot 6370$ km

$46,516° \equiv d = \frac{46,516° \cdot 2\pi \cdot 6370}{360°} = 5171,61$ km

2) $\alpha = 90° - 46,516° = 43,483\overline{3}° \equiv D = \frac{43,483\overline{3}° \cdot 2\pi \cdot 6370}{360°} = 4834,37$ km

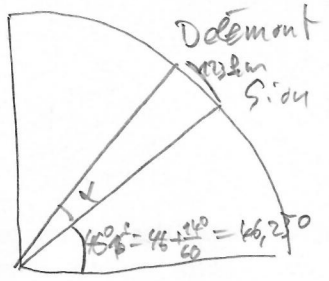
$360° \equiv 2\pi \cdot 6370$ km

3) $\beta = 90° + 46,516° = 136,516\overline{6}° \equiv l = \frac{136,516\overline{6}° \cdot 2\pi \cdot 6370}{360°}$

$360° \equiv 2\pi \cdot 6370$ km

donc $l = 15157,58$ km

7.2



$360° \equiv 2\pi \cdot 6370$ km

$\alpha \equiv 123$ km

donc $\alpha = \frac{360° \cdot 123}{2\pi \cdot 6370} = 1,106...°$

$\Rightarrow 46,25° + 1,106...° = 47,339...° = 47° 0,339... \cdot 60' = 47°20'$ N

7.3 $49° 45' = 49 + \frac{45°}{60} = 49,75°$ et $40°15' = 40 + \frac{15°}{60} = 40,25°$

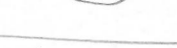
$49,75° - 40,25° = 9,5° \equiv d = \frac{9,5° \cdot \pi \cdot 6370}{360°} = 1056,19$ km

$360° \equiv 2\pi\ 6370$ km

7.4 $2\pi \cdot 6370$ km $\equiv 360°$

50 km $\equiv \alpha = \frac{50 \cdot 360°}{2\pi \cdot 6370} = 0,4497° = 0,4497 \cdot 60' = 26,98'$

$= 26' 0,983 \cdot 60'' = 26'59''$

7.5 Rappel angle plein : 2π  , angle plat : π  cf page 119

7.6 a) $\pi \equiv 180°$, $\alpha \equiv 90°$ $\Rightarrow \alpha = \frac{\pi \cdot 90°}{180°} = \frac{\pi}{2}$ b) $\pi \equiv 180°$, $\beta = 270°$ $\Rightarrow \beta = \frac{\pi \cdot 270°}{180°} = \frac{3\pi}{2}$ c) $\pi \equiv 180°$, $\gamma = 45°$ $\Rightarrow \gamma = \frac{\pi \cdot 45°}{180°} = \frac{\pi}{4}$

d) $\pi \equiv 180°$, $\delta \equiv 135°$ $\Rightarrow \delta = \frac{\pi \cdot 135°}{180°} = \frac{3\pi}{4}$ e) $\pi \equiv 180°$, $\varepsilon \equiv 20°$ $\Rightarrow \varepsilon = \frac{\pi \cdot 20°}{180°} = \frac{\pi}{9}$ f) $\pi \equiv 180°$, $\zeta \equiv 120°$ $\Rightarrow \zeta = \frac{\pi \cdot 120°}{180°} = \frac{2\pi}{3}$

⚠ sur la TI-30 : numérateur [a b/c] dénominateur [=]

(éventuellement [2nd] [d/c])