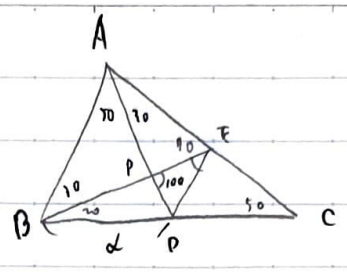
No.

Date

Goal : $\frac{DE}{\sin 100^\circ} = \frac{PD}{\sin x}$



$\triangle BPD$: $BP = BD$. $(\because \angle P = \angle D)$.

$\Rightarrow \frac{\alpha}{\sin 80^\circ} = \frac{PD}{\sin 20^\circ}$ で PD は出る.

$\angle ACB = 50^\circ$ より, $\triangle ABC$: $AB = AC$.

$\triangle ABD$: $DA = DB$ $(\because \angle A = \angle B)$.

$\Rightarrow \frac{\alpha}{\sin 50^\circ} = \frac{AB}{\sin 80^\circ}$ で $AB = AC$ が出る.

$\angle AEB = 180^\circ - 80^\circ - 30^\circ = 70^\circ$ より,

$\frac{AB}{\sin 70^\circ} = \frac{AE}{\sin 30^\circ}$ で AE が出る.

$CE = AC - AE$ で導出できて,

BC は $\frac{AB}{\sin 50^\circ} = \frac{BC}{\sin 80^\circ}$ より,

$DC = BC - \alpha$ で導出できる.

以上より, DE は余弦定理で導出可能.

したがって, 冒頭で示した等式より, $\angle x$ が導出できる.