

G.P.S

20028
20028
20028
12.7 km

$$\begin{array}{lcl} \text{START } L_1 & \text{S } 32 \ 28 \ 05 & = 32.46805556 \\ & \lambda_1 \text{ E } 123 \ 51 \ 35 & = 123.8597222 \end{array}$$

$$\begin{array}{lcl} \text{FINISH } L_2 & \text{S } 31 \ 38 \ 15 & = 31.6375 \\ & \lambda_2 \text{ E } 129 \ 00 \ 07 & = 129.001944444 \end{array}$$

$$\begin{array}{lcl} \sin L_1 & .536829304 & 129.001944444 \\ \sin L_2 & .524543247 & 123.8597222 \\ \cos L_1 & .843690878 & \lambda_1 \sim \lambda_2 \quad 5.1422222 \\ \cos L_2 & .851383803 & \\ \cos \lambda_1 \sim \lambda_2 & = .995975287 & \end{array}$$

$$\begin{aligned} \cos \text{DIST} &= (.536829304 \times .524543247) + (.843690878 \times \\ &\quad .851383803 \times .995975287) \\ &= .281590186 + .715413777 \\ &= .997003963 = 4.436287733^\circ \end{aligned}$$

$$\begin{aligned} \text{DIST} &= 6371 \times \frac{57.29578}{4.436287733} \text{ km} \\ &= 493.2926849 \text{ km} \end{aligned}$$