

PW#1 Law of Sines

$$\textcircled{1} \quad \frac{\sin 93^\circ}{10} = \frac{\sin 48^\circ}{a}$$

$$\boxed{a = 7.44}$$

$$\frac{\sin 93^\circ}{10} = \frac{\sin 39^\circ}{b}$$

$$\boxed{b = 6.3}$$

$$\textcircled{2} \quad \frac{\sin 65^\circ}{10} = \frac{\sin 80^\circ}{b}$$

$$\boxed{b = 10.87}$$

$$\frac{\sin 65^\circ}{10} = \frac{\sin 35^\circ}{c}$$

$$\boxed{c = 6.33}$$

$$\textcircled{3} \quad \frac{\sin 48^\circ}{7.3} = \frac{\sin 21^\circ}{b}$$

$$\boxed{b = 3.52}$$

$$\frac{\sin 48^\circ}{7.3} = \frac{\sin 111^\circ}{c}$$

$$\boxed{c = 9.17}$$

$$\textcircled{4} \quad \frac{\sin 124^\circ}{15.4} = \frac{\sin T}{9.1}$$

$$\begin{aligned} \cancel{\angle} T &= 29.3^\circ \\ \cancel{\angle} R &= 26.7^\circ \end{aligned}$$

$$\frac{\sin 124^\circ}{15.4} = \frac{\sin 26.7^\circ}{r}$$

$$\boxed{r = 8.35}$$

$$\textcircled{5} \quad \frac{\sin 80^\circ}{c} = \frac{\sin 40^\circ}{4}$$

$$\boxed{c = 6.13}$$

$$\frac{\sin 60^\circ}{b} = \frac{\sin 40^\circ}{4}$$

$$\boxed{b = 5.39}$$

$$\boxed{\cancel{\angle} \delta = 80^\circ}$$

$$\textcircled{6} \quad \frac{\sin 130^\circ}{5} = \frac{\sin 35^\circ}{a}$$

$$\boxed{a = 3.74}$$

$$\frac{\sin 130^\circ}{5} = \frac{\sin 15^\circ}{b}$$

$$\boxed{b = 1.69}$$

$$\boxed{\cancel{\angle} \delta = 130^\circ}$$

$$\textcircled{7} \quad \angle ABC = 180^\circ - 31^\circ = 149^\circ \quad \angle ACB = 180 - 18 = 149 = 13^\circ$$

$$a) \frac{\sin 13^\circ}{3950} = \frac{\sin 18^\circ}{x} \quad b) \sin 31^\circ = \frac{y}{5426}$$

$$x \approx 5426'$$

$$y \approx 2794'$$

$$\textcircled{8} \quad \frac{\sin 81^\circ}{10} = \frac{\sin 48^\circ}{x} \quad \frac{\sin 81^\circ}{10} = \frac{\sin 51^\circ}{y}$$

$$x = 7.5 \text{ mi}$$

$$y = 7.8 \text{ mi}$$