Tennis Picture 1

$$m = (548 - 724)/(832 - 748);$$

$$\text{map1} = \text{Solve}\left[374 == \sqrt{(724 - V_y)\,\text{^}2 + (748 - V_x)\,\text{^}2}\&\&724 - V_y == m * (748 - V_x), \{V_x, V_y\}\right];$$

$$N[\text{map1}]$$

$$\{\{V_x \to 909.093, V_y \to 386.472\}, \{V_x \to 586.907, V_y \to 1061.53\}\}$$

Tennis Picture 2

$$m = (518 - 754)/(1026 - 924);$$

$$\text{map2} = \text{Solve}\left[689 == \sqrt{(754 - V_y)\,\text{^}2 + (924 - V_x)\,\text{^}2}\&\&754 - V_y == m * (924 - V_x), \{V_x, V_y\}\right];$$

$$N[\text{map2}]$$

$$\{\{V_x \to 1197.35, V_y \to 121.544\}, \{V_x \to 650.65, V_y \to 1386.46\}\}$$