Hints for Exercise Sheet 2

Exercise 1. Perpendicular bisector.
You can assume \( P \neq Q \).

Exercise 3: Spherical trigonometry.
You can use the following identities without proof:

\[
\frac{\sin \frac{a+b}{2}}{\cos \frac{c}{2}} = \frac{\cos \frac{a-b}{2}}{\cos \frac{c}{2}}
\]

\[
\frac{\cos \frac{a+b}{2}}{\sin \frac{c}{2}} = \frac{\cos \frac{a+b}{2}}{\cos \frac{c}{2}}
\]

\[
\sin \gamma \sin a \sin b = 2 \sqrt{\sin s \sin (s - a) \sin (s - b) \sin (s - c)}
\]