Q1. ,

Write down the 34 P that relates

A1.

or .

Q2. Given 2 lines: . Convert these lines to homogeneous representation and find the intersection in homogeneous coordinates. Convert this point back to Cartesian coordinates.

A2.

homogeneous representation:

homogeneous intersection:

Cartesian coordinates:

**Typical mistake:**

Q3. Write down the 22 rotation matrix which has the effect of an anti-clockwise rotation as illustrated, e.g. it maps (1,0) to (cos θ, sin θ).

(1,0)

θ

A3.

**Typical mistake:**  and

Q4. Write as a line equation in the homogeneous form (k is a constant). Thus, find the point at ∞ on . What can you say about this infinity point for lines with different k?

A4.

homogeneous form: .

point at ∞: , no matter what k is.

**Typical mistake:**