Started on	Thursday, 21 January 2021, 2:07 PM
State	Finished
Completed on	Thursday, 21 January 2021, 2:20 PM
Time taken	13 mins 28 secs
Grade	**3.90** out of 10.00 (**39**%)

Question **1**

Partially correct

Mark 0.90 out of 3.00

Consider two planes P1 and P2 that pass through the origin in 3D space (not homogeneous co-ordiantes). They are represented by the corresponding normal vectors: v1: [1 4 -3] and v2: [2 1 2]. Which of the following are true regarding these planes? (NOTE: Select all correct answers)

- ☑ a. The two planes are perpendicular to each other ✔

- ☐ b. The planes P1 and P2 are neither perpendicular, nor parallel to each other

- ☐ c. The two planes are parallel to each other

- ☐ d. The point represented by v1 lies on plane P2, and the point represented by v2 lines on plane P1

- ☐ e. The intersection of the two planes is a line passing though origin

Your answer is partially correct.

You have correctly selected 1.

The correct answers are:

The two planes are perpendicular to each other,

The intersection of the two planes is a line passing though origin,

The point represented by v1 lies on plane P2, and the point represented by v2 lines on plane P1

Question **2**

Incorrect

Mark 0.00 out of 3.00

The line joining the point at infinity: [3 4 0]T and the point: [{2 3 1]T is given by the 3-vector: [4   ✖   -3

✖   1]T

NOTE: Give the answer as [a/c b/c. 1]T if your answer is [a b c]T.

Question **3**

Incorrect

Mark 0.00 out of 1.00

True or False: The only point in the projective space that does not have a corresponding image is the world origin.

Select one:

◉ True ✖

○ False

It is the camera centre, not the world origin.

The correct answer is 'False'.

Question **4**

Correct

Mark 3.00 out of 3.00

You ran the camera calibration procedure with a set of known world points and ended up with the following P matrix.

Row1: P1 = [0.1432 0.0084 0.0221 -0.0026]

Row2: P2 = [0.0088 0.1071 -0.0976 0.0534]

Row3: P3 = [0.0004 -0.0018 -0.0020 0.9772]

The image center, (u0, v0) is given by (1 ✖ , -1 ✖) x 10^-6

Note: Answer should be given to two decimal places accuracy when multiplied by 10^6