Homogeneous Coordinates

5 questions

point

1.

The homogeneous coordinates of a point P are (1, 2, 1). Which of the following (homogeneous) coordinates represent the same point?

- (1, 2, 0)
- (1, 1, 2)
- (2,4,2)
- (-0.5, -1, -0.5)

1 point

2.

Given a square ABCD, with A=(0,0,1) and C=(1,1,1), the equation of the diagonal BD in \mathbb{P}^2 has the form $l^T x = 0$ with l equal to

Clarification: For this and following questions, we use \mathbb{P}^2 to denote the real projective plane.

- (-1, 2, 1)
- (-1, 1, 1)
- (1, -1, 1) (-1, -1, 1)

3.

Determine the equation of the line in \mathbb{P}^2 through the points (a,0,1) and (0,b,1).

- $\begin{pmatrix} -b \\ -a \\ ab \end{pmatrix}$

1 point

4.

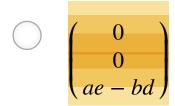
Determine the equation of the line in \mathbb{P}^2 through the points (a,b,c) and (d,e,0).

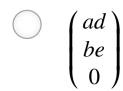
- $\begin{pmatrix}
 -ce \\
 cd \\
 ae bd
 \end{pmatrix}$
- $\begin{pmatrix}
 ce \\
 cd \\
 ae + bd
 \end{pmatrix}$
- $\begin{pmatrix}
 ce \\
 cd \\
 ae bd
 \end{pmatrix}$

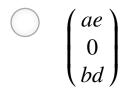
1 point

5.

Determine the equation of the line in \mathbb{P}^2 through the points (a,b,0) and (d,e,0).







$$\begin{pmatrix} 0 \\ 0 \\ ae + bd \end{pmatrix}$$

4 questions unanswered

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