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| **Reflections Using Matrices** | | |
| **(a)** | **(b)** | **(c)** |
| By considering the unit square, determine the matrix which describes a reflection in the -axis. | Describe fully the single transformation represented by the matrix | By considering the unit square, determine the matrix which describes a reflection in the line . |
| **(d)** | **(e)** | **(f)** |
| The point is mapped onto the point when reflected in the -axis. Using matrix algebra, find the coordinates . | The point is mapped onto the point when reflected in the line . Using matrix algebra, find the coordinates . | A triangle with vertices at , and is reflected in the line . Use matrix algebra to find the coordinates of the vertices of the reflected triangle. |
| **(g)** | **(h)** | **(i)** |
| A triangle with vertices at , and is reflected so its vertices map to , and . Find the transformation matrix and the line of reflection. | The point is mapped onto the point following a reflection in the line . Use matrix algebra to find the values of and . | The point is mapped onto the point following a reflection in the line -axis. Use matrix algebra to find the values of and . |