Practice worksheet | Matrices and transformations

Combined transformations and their order

Name: _____ Date: _____

6 questions | 12 marks

1. First dilate by factor 3, then reflect in the y-axis. Give the matrix. [2 marks]

2. First reflect in $y = x$, then in the x-axis. Describe the result. [2 marks]

3. For $A = \begin{pmatrix} 2 & 0 \\ 0 & 1 \end{pmatrix}$ and $B = \begin{pmatrix} 0 & -1 \\ 1 & 0 \end{pmatrix}$, find BA. [2 marks]

4. For those A and B, find AB and compare. [2 marks]

5. Explain why dilation kI commutes with every linear transformation A. [2 marks]

6. Project $(2, 5)$ onto the x-axis, then rotate 90° counterclockwise. [2 marks]