Lesson 12.6 Practice: Matrices as Transformations

School Launch · Algebra II · Unit 12: Matrices and Vectors · Worksheet A

Calculator for decimals

Name _____ Date _____ Score _____ / 10

Show your work under each problem, one step per line, and check your answer. Word problems: name the unknown, write the equation, solve, and answer in a sentence with units.

1. Apply the transformation matrix $\begin{bmatrix} 3 & 0 \\ 0 & 3 \end{bmatrix}$ to the point $(5, 3)$ and name the transformation. EASY

2. Apply the transformation matrix $\begin{bmatrix} 3 & 0 \\ 0 & 3 \end{bmatrix}$ to the point $(1, -4)$ and name the transformation. EASY

3. Apply the transformation matrix $\begin{bmatrix} 0 & -1 \\ 1 & 0 \end{bmatrix}$ to the point $(-6, 6)$ and name the transformation. EASY

4. Apply the transformation matrix $\begin{bmatrix} 0 & -1 \\ 1 & 0 \end{bmatrix}$ to the point $(-1, 0)$ and name the transformation. MEDIUM

5. Apply the transformation matrix $\begin{bmatrix} 3 & 0 \\ 0 & 3 \end{bmatrix}$ to the point $(-3, -5)$ and name the transformation. MEDIUM

6. Apply the transformation matrix $\begin{bmatrix} 0 & -1 \\ 1 & 0 \end{bmatrix}$ to the point $(-6, 2)$ and name the transformation. MEDIUM

7. Apply the transformation matrix $\begin{bmatrix} 1 & 0 \\ 0 & -1 \end{bmatrix}$ to the point $(-4, -4)$ and name the transformation. MEDIUM

8. Apply the transformation matrix $\begin{bmatrix} 1 & 0 \\ 0 & -1 \end{bmatrix}$ to the point $(-3, 4)$ and name the transformation. HARD

9. Apply the transformation matrix $\begin{bmatrix} 3 & 0 \\ 0 & 3 \end{bmatrix}$ to the point $(3, 3)$ and name the transformation. HARD

10. Apply the transformation matrix $\begin{bmatrix} 3 & 0 \\ 0 & 3 \end{bmatrix}$ to the point $(5, -4)$ and name the transformation. HARD