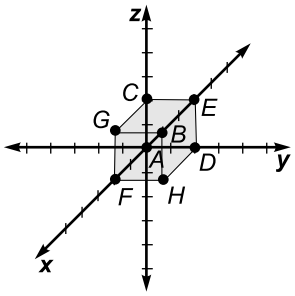
NAME _____ DATE _____ PERIOD _____

Practice

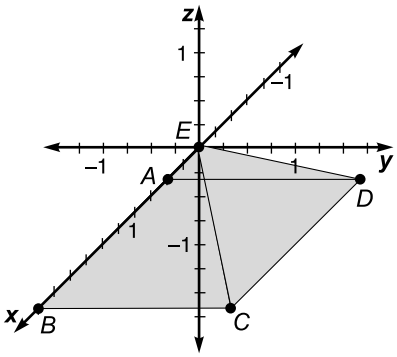
Transformation Matrices in Three-Dimensional Space

Write the matrix for each figure.

1.



2.



Translate the figure in Question 1 using the given vectors. Graph each image and write the translated matrix.

3. $\vec{\mathbf{a}}\ \langle 1, 2, 0\rangle$

4. $\vec{\mathbf{b}}\ \langle -1, 2, -2\rangle$

Transform the figure in Question 2 using each matrix. Graph each image and describe the result.

5. $\begin{bmatrix} 2 & 0 & 0 \\ 0 & 2 & 0 \\ 0 & 0 & 2 \end{bmatrix}$

6. $\begin{bmatrix} 1 & 0 & 0 \\ 0 & 1 & 0 \\ 0 & 0 & -1 \end{bmatrix}$