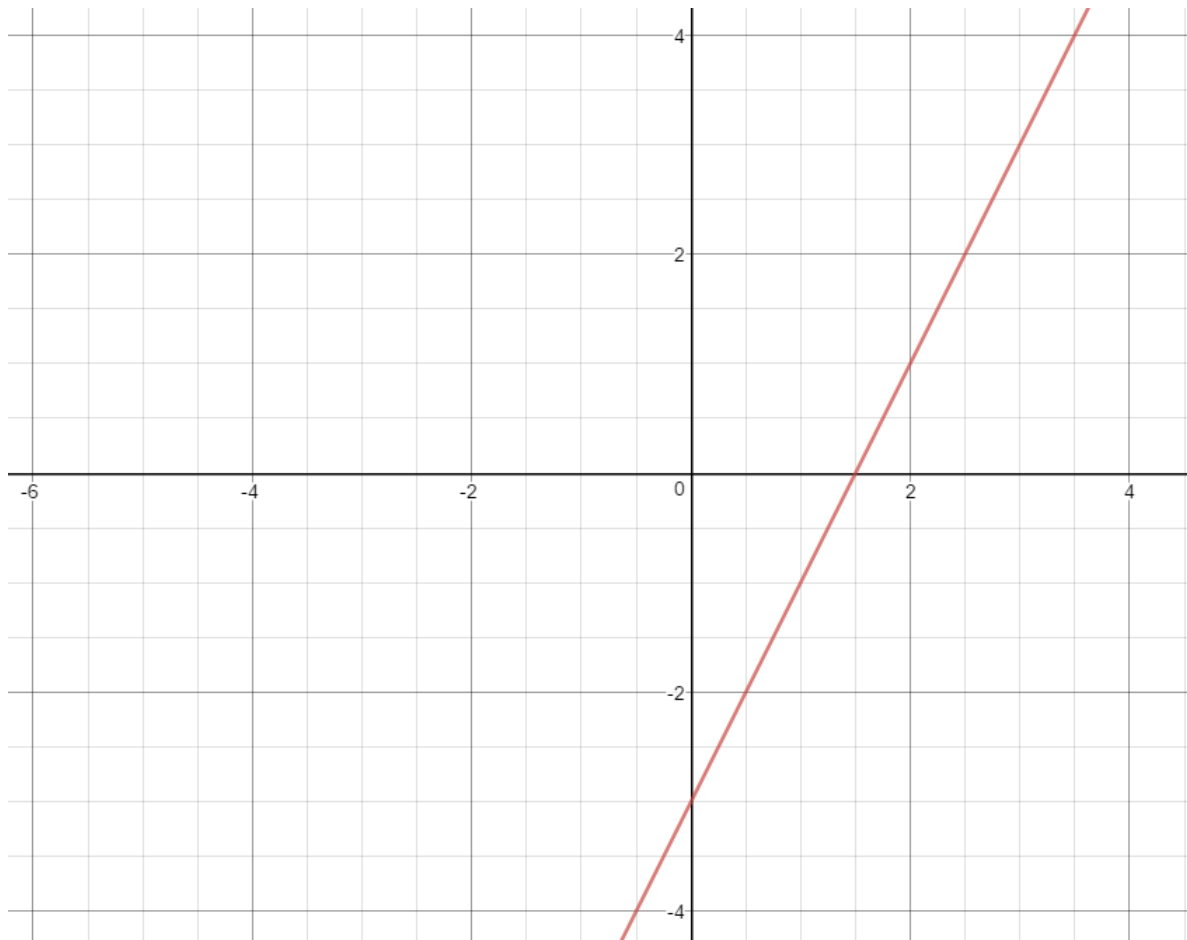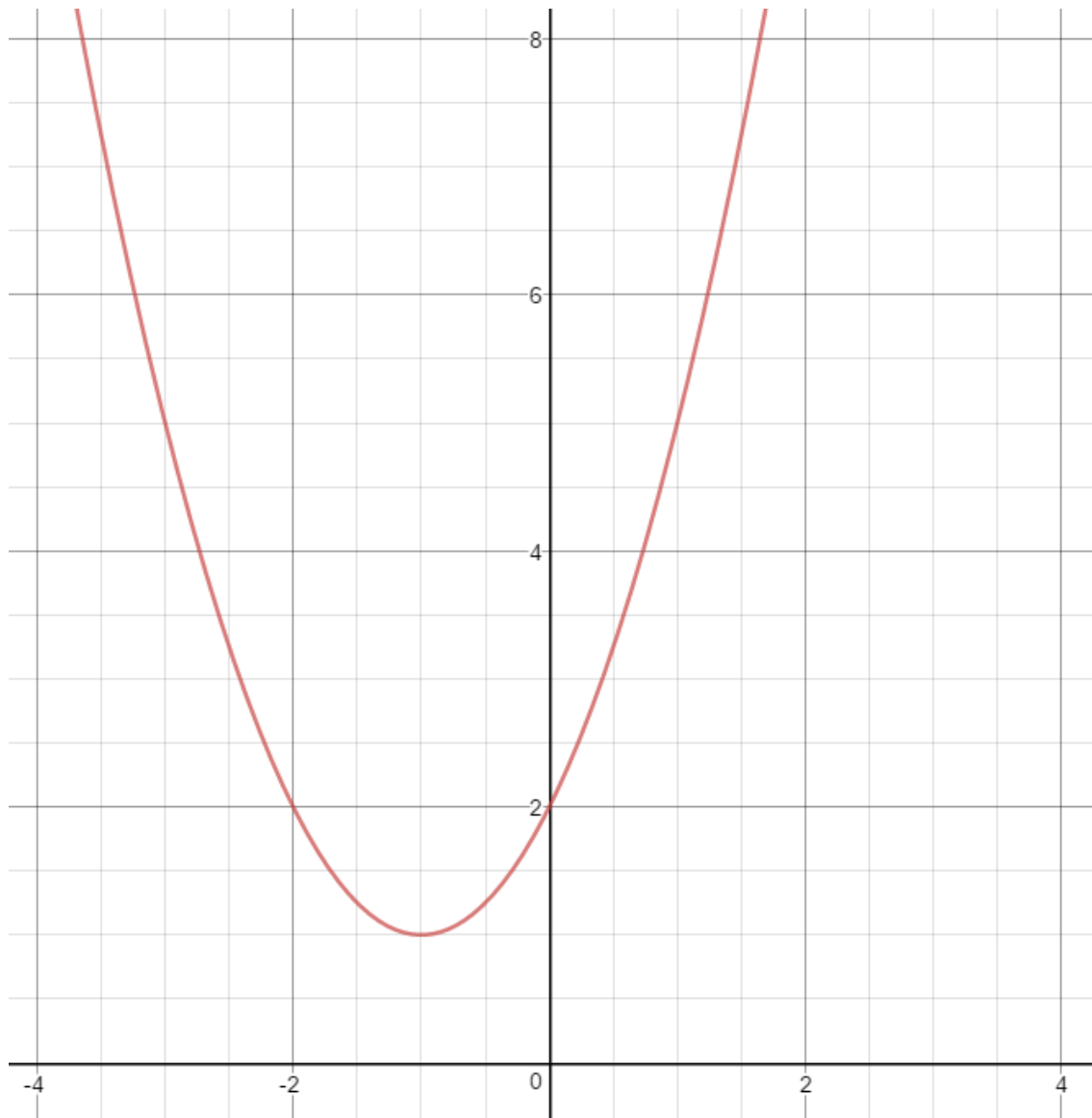# Linear transformations with Matrices lesson 2 - Translation of a curve

Magic Monk Tutorials

1 Translate the curve $y = 2x - 3$ by the point $p_1 = \begin{pmatrix} -2 \\ 3 \end{pmatrix}$ and plot it in the x-y plane.

2 Translate the curve $y = x^2 + 2x + 2$ by the point $T = \begin{pmatrix} 1 \\ -1 \end{pmatrix}$, simplify the resulting function and plot the result in the x-y plane.

3 Find a point that translates the curve $y = \dfrac{1}{x}$ so that it passes through the point $x = y = 4$.

4 Translate the curve $y = \sin(x)$ by the point $T = \begin{pmatrix} -\pi/2 \\ 0 \end{pmatrix}$, and plot the result in the x-y plane.