$$\frac{3x^3}{-\frac{1}{2}x^2} = \frac{3x}{-\frac{1}{2}} = 3x \div -\frac{1}{2} = 3x \cdot (-2) = -6x$$

$$-6x(-\tfrac{1}{2}x^2 + 0x + 1) = 3x^3 + 0x^2 - 6x$$

$$\begin{array}{r|l} & -6x \\ \hline -\frac{1}{2}x^2 + 0x + 1 & 3x^3 - x^2 + 4x + 2 \\ & \underline{-(3x^3 - 0x^2 - 6x)} \\ & -x^2 + 10x + 2 \end{array}$$

$$\frac{-x^2}{-\frac{1}{2}x^2} = \frac{1}{\frac{1}{2}} = 1 \div \frac{1}{2} = 1 \cdot 2 = 2$$

$$2\left(-\frac{1}{2}x^2 + 0x + 1\right) = -x^2 + 0x + 2$$