

# Solving Problems with the Inverse Matrix

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Name: \_\_\_\_\_ Date: \_\_\_\_\_

We can use the inverse matrix to help us solve real problems. Consider the situation below where we want to find the matrix  $X$  given matrix  $A$  and  $B$ .

$$A = \begin{bmatrix} 1 & 2 \\ 3 & 4 \end{bmatrix} \text{ and } B = \begin{bmatrix} 2 & -1 \\ 2 & 0 \end{bmatrix}$$

find the matrix  $X$ , given...  $XA = B$

**Try this...**

$$C = \begin{bmatrix} 1 & 0 \\ -1 & 2 \end{bmatrix} \text{ and } D = \begin{bmatrix} 2 & -1 \\ 1 & 2 \end{bmatrix}$$

find the matrix  $X$ , given...  $XC = D$