Solve the following using Matrix and Determinant operations (show ***ALL*** work below):

Name:

Period:

1. Find the value of Determinant ***D***: (hint: bottom minus top)

***D*** = $\left|\begin{matrix}8&4\\7&6\end{matrix}\right|$ ***D* = \_\_\_\_\_**

1. Find the value of Determinant ***D***:

***D*** = $\left|\begin{matrix}2&-4\\9&-3\end{matrix}\right|$ ***D* = \_\_\_\_\_**

1. Find the value of Determinant ***D***:

***D*** = $\left|\begin{matrix}-4&-6&2\\5&-1&3\\-2&4&-3\end{matrix}\right| \begin{matrix}&\\&\\&\end{matrix}$ ***D* = \_\_\_\_\_**

1. If **A** = $\left[\begin{matrix}2&-3\\4&5\end{matrix}\right]$; use the set up below to find: **A-1**

**A-1 =** $\frac{1}{\left|\begin{matrix}&\\&\end{matrix}\right|}\left[\begin{matrix}&\\&\end{matrix}\right]$ **A-1** = $\left[\begin{matrix}&\\&\end{matrix}\right]$

Given the following Matrices solve the matrix equation below (show ***ALL*** work):

A = $\left[\begin{matrix}7&0\\5&3\end{matrix}\right]$ and B = $\left[\begin{matrix}3&-3&6\\5&4&-2\end{matrix}\right]$ and C = $\left[\begin{matrix}-1&4\\-2&-1\\2&6\end{matrix}\right]$ and D = $\left[\begin{matrix}3&-1\\1&4\\0&-2\end{matrix}\right]$

1. Solve for the matrix **X**. Plan your steps using algebraic manipulation, or orders of operations, or a combination of matrix operations as required to find and evaluate the det[X]:

**AX = B(D + C)**

 **|X|** = \_\_\_\_\_\_