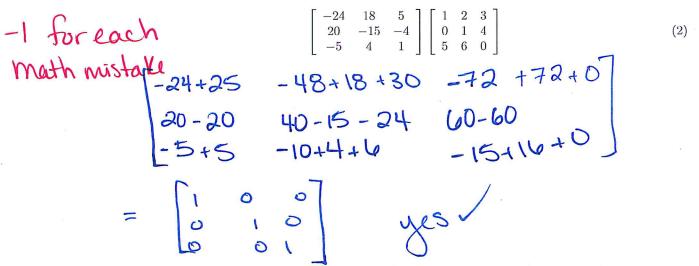


1. Are the following matrices inverses? Prove it. (3 points)



2. Find the gradient of f at (1,2,1). Show your work. (3 points)

 $f(x, y, z) = x^2yz^3 + 5xz + 3y^2 + z + 10$ Jame #2 Same as #2 691 don't get this (9, 13, 12)

Are the following vectors orthogonal? How do you know? Show your work. (2 points)

6.1+ 2.-3+3.1
$$\begin{bmatrix} 1\\2\\3 \end{bmatrix} \begin{bmatrix} 6\\-3\\1 \end{bmatrix}$$
 (3)

-1 thes 6-6+3=3

-1 how do you no Because the dot-product in nonzero.

Enow book Minimum: $\sqrt{2}$

4. What does it mean for a model to be generalizable? (2 points)

-1 if they don't Perform well on unseen data. Say anything about either unsun or held out or test data.

-2 if nonsense