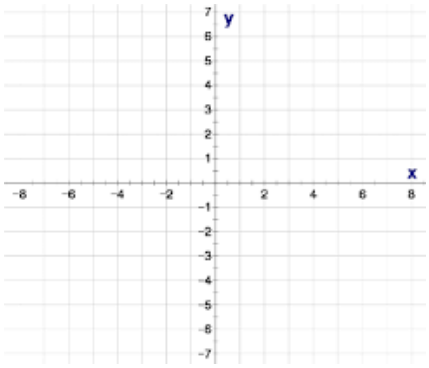
Homework:

As it turns out, the simple matrices mentioned earlier have some special properties related to each other. The vectors that multiply to the simple matrices are orthogonal to each other. What does orthogonal mean? It means that the vectors form a right angle with each other. For instance, you may be familiar with



This is the x-y graph. The x-axis can be represented by the vector (1,0). The y-axis can be represented by the vector (0,1). They form right angles with each other. This property of forming a right angle implies that they multiply to one.

Example: (0,1)*(1,0) = $0 * 1 + 1 * 0 = 0$

This is the tool we use to show that a vector can be orthogonal to another vector in 5-dimensional space.

Example: Let the vector d be equal to (-3,2,2,2,-3) and the vector b be equal to (4,-3,-1,4,-44)

Then $b * d = (-3,2,2,2,-3) * (4,-3,-1,4,-4) = -12 - 6 - 2 + 8 + 12 = 0$

Homework 1: Show the work for 2B+C is the matrix on the 3rd page

Homework 2: Use the multiplication as shown in example for simple matrices on page one to show that d*d=(-3,2,2,2,-3)*(-3,2,2,2,-3)= D, where D is the matrix D on page 2.

Homework 3: Did this paper help clear up the lecture I gave?

Cheers,
Rocky