Homework 1

1. Find the vector **x**

   if: (1, 2, 3, 0) + 2**x** = (-1, 0, 1, 6)

2. Find the vector C, if BC is three times

   shorter than AB.

   A = (-1, 5, 1)

   B = (2, 2, -2)
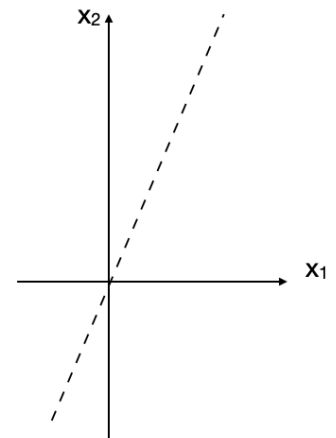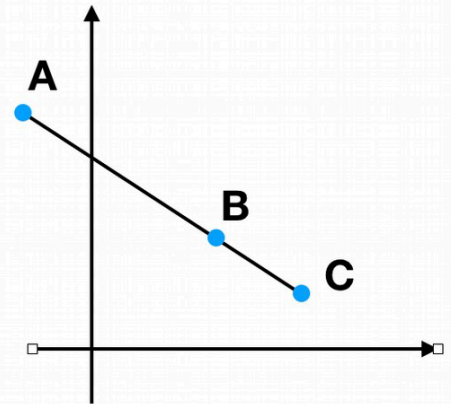
3. A line comes through

   V1 = (1, 1, 3)

   V2 = (2, 0, -1)

   Does the point (1, 2, 1) belong to the given line?

4. We have got a set of vectors in the two-

   dimensional vector space. All these vectors

   belong to the line $x_2 = 2x_1$ shown as a dotted line.

   Does this vector set form a liner space?

5. Optional:

   Find the vectors B and C if A = (0, 1)

   hint: it is known that AB and BC make a "golden

   ratio".

   https://en.wikipedia.org/wiki/Golden_ratio