HOMEWORK DUE WEDNESDAY APRIL 2ND

1. Stewart

14.1
7-12
30-32

2. Other

In each of the following there is one parametrization that does not sketch out the same curve in $\Re^3$. Determine in each case which one it is.

1.
a) $f(t) = (t, t, t), t \in [0, 1]$
b) $f(t) = (t^2, t^2, t^2), t \in [0, 1]$
c) $f(t) = (2t, 2t, 2t), t \in [0, 1/3]$

2.
a) $f(t) = (sin(t), cos(t), tan(t)), t \in [0, \pi/6]$
b) $f(t) = (t, \sqrt{1-t^2}, \frac{t}{\sqrt{1-t^2}}), t \in [0, 1/2]$
c) $f(t) = (t^2, 1-t^2, 1-\frac{1}{1-t^2}), t \in [0, \frac{\sqrt{2}}{2}]$

3.
a) $f(t) = (1-5t, 2-10t, 7), t \in [0, 1]$
b) $f(t) = (1+t, 2+2t, 7), t \in [0, 5]$
c) $f(t) = (6-5t, 12-10t, 7), t \in [0, 1]$

4. Give a parametrization of the graph of $f(x) = x^5, x \in [-5, 5]$.