Name _____

Homework 21
Sections 18.1 & 18.2

1. (3) Numbers 24 and 26 on page 933.

24. C_1: pos neg zero

C_2: pos neg zero

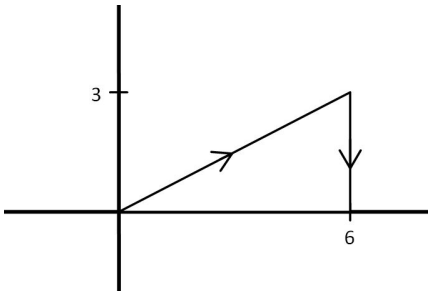
C_3: pos neg zero

26. C_1: pos neg zero

C_2: pos neg zero

C_3: pos neg zero

2. (5) Determine the integral of $\vec{G}(x,y) = \dfrac{1}{x+1}\vec{i} + (x+y)^2\vec{j}$ along the curve shown below.



3. (6) Evaluate $\int_C xy\,dx + z\,dy - y^2\,dz$ where the curve C is the path from $(1,0,0)$ to $(9,-2,20)$ parameterized by $r(t) = t^2\vec{i} + (1-t)\vec{j} + (t^3 - 3t + 2)\vec{k}$.

4. (6) Compute $\int_C \vec{F} \cdot d\vec{r}$ for the vector field $\vec{F} = y^2\vec{i} + xy\vec{j}$ and the curve C shown below.