

NAME: \_\_\_\_\_

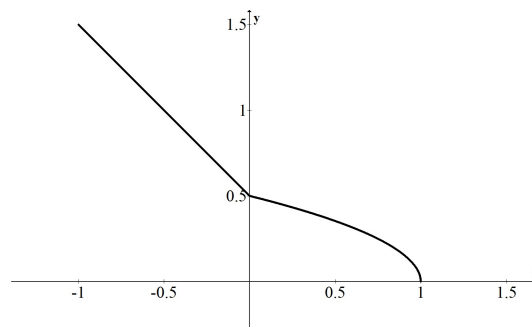
### Test Prep 2

Let  $C_1$  be the arc of the curve  $x + 4y^2 = 1$  from  $(1, 0)$  to  $(0, \frac{1}{2})$ .

And let  $C_2$  be the line segment from  $(0, \frac{1}{2})$  to  $(-1, \frac{3}{2})$ .

Let  $C$  consist of  $C_1$  followed by  $C_2$ . The curve  $C$  is shown below with the desired orientation.

1. Give a parameterization for  $C_1$ .



2. Give a parameterization for  $C_2$ .

3. Let  $\mathbf{F} = \langle x, -y \rangle$  be a vector field.

Using your parameterizations, compute  $\int_C \mathbf{F} \cdot d\mathbf{r} = \int_{C_1} \mathbf{F} \cdot d\mathbf{r} + \int_{C_2} \mathbf{F} \cdot d\mathbf{r}$