

## Ryan Fahrenkrug

MECH 105

Homework 21

11/12/2017

```
clc
clear
close all
```

### Calculations

```
syms x
f=((x-1)*(x-3))/((0-1)*(0-3))*0.06+((x-0)*(x-3))/((1-0)*(1-3))*0.32+((x-0)*(x-1))/((3-0)*(3-1))*0.6;
d(x)=diff(f);
mass_flux=double((1.52e-6)*d(0))/1000000;
con=(100^2*60*60*24*365.25)/1000; % conversion to kg/(m^2yr);
flux_con=double(mass_flux*con);
pollution=double(flux_con*(3.6e6));
```

### Outputs

```
fprintf('The pollution is %3.3f kg per year.\n',pollution);
```

The pollution is 518.050 kg per year.