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% Matt McDade
% ANM 2
% HW 5 Problem 1a

function hw_5_1a
    close all; clc;

    a = 0.5; b = 10^-5;

    k = 0;
    Pp = @(t, P) a*P - b*P.^2 - k;

    P0 = 1000;
    tspan = [0 100];
    tol = 1e-6;
    options = odeset('AbsTol',tol,'RelTol',tol);

    [T1, M1] = ode45(Pp, tspan, P0, options);

    figure(1)
    plot(T1, M1)
end
```

