```
clear all

x=-8:1e-2:8;
y=cos(x);

p0=ones(1,length(x));
p2=1-x.^2/2;
p4=p2+x.^4/factorial(4);
p6=p4-x.^6/factorial(6);
p8=p6+x.^8/factorial(8);
p10=p8-x.^(10)/factorial(10);

figure(1);clf(1)
plot(x,y,'k','Linewidth',2)
hold on
plot(x,p0,'r','Linewidth',2)
plot(x,p2,'g','Linewidth',2)
plot(x,p4,'b','Linewidth',2)
plot(x,p6,'m','Linewidth',2)
plot(x,p8,'c','Linewidth',2)
plot(x,p10,'r-.','Linewidth',2)

legend('y=cos(x)','p_0','p_2','p_4','p_6','p_8','p_{10}',4)
ylim([-5 5])
title('Taylor polynomials for y=cos(x)')
xlabel('x')
ylabel('y')

figure(1)
Taylor=strcat('Taylor_polynomials_cos.eps');
print ('-depsc2', Taylor);

z=sin(x);

p1=x;
p3=p1-x.^3/factorial(3);
p5=p3+x.^5/factorial(5);
p7=p5-x.^7/factorial(7);
p9=p7+x.^9/factorial(9);
p11=p9-x.^(11)/factorial(11);

figure(2);clf(2)
plot(x,z,'k','Linewidth',2)
hold on
plot(x,p1,'r','Linewidth',2)
plot(x,p3,'g','Linewidth',2)
plot(x,p5,'b','Linewidth',2)
plot(x,p7,'m','Linewidth',2)
plot(x,p9,'c','Linewidth',2)
plot(x,p11,'r-.','Linewidth',2)

legend('y=sin(x)','p_1','p_3','p_5','p_7','p_9','p_{11}',4)
ylim([-5 5])
title('Taylor polynomials for y=sin(x)')
xlabel('x')
ylabel('y')
grid on

figure(2)
Taylor_sine=strcat('Taylor_polynomials_sin.eps');
print ('-depsc2', Taylor_sine);
```