# Entrega 1

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## p11

```
% MODELO 1
x = linspace(0,4,300);
y = sin(3*x.^2).*exp(-x/2);
plot(x,y,'k','linewidth',1.5)
hold on
x = 0:4;
y = sin(3*x.^2).*exp(-x/2);
plot(x,y,'ko','linewidth',1.5)
hold off

% MODELO 2
x = linspace(0,5,300);
y = cos(x.^2.5)./(2+x.^2);
plot(x,y,'k','linewidth',1.5)
hold on
x = 0:5;
y = cos(x.^2.5)./(2+x.^2);
plot(x,y,'ko','linewidth',1.5)
hold off

% MODELO 3
x = linspace(0,5,300);
y = cos(x.^1.5).*sin(x);
plot(x,y,'k','linewidth',1.5)
hold on
x = 0:5;
y = cos(x.^1.5).*sin(x);
plot(x,y,'ko','linewidth',1.5)
hold off

% MODELO 4
x = linspace(0,5,300);
y = x.*sin(3*x).*sqrt(4+sin(x));
plot(x,y,'k','linewidth',1.5)
hold on
x = 0:5;
y = x.*sin(3*x).*sqrt(4+sin(x));
plot(x,y,'ko','linewidth',1.5)
hold off

% MODELO 5
x = linspace(0,5,300);
y = exp( sin(x.^2)./(1+x) );
plot(x,y,'k','linewidth',1.5)
hold on
x = 0:5;
y = exp( sin(x.^2)./(1+x) );
plot(x,y,'ko','linewidth',1.5)
hold off
```

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## p12

```
a = rand(1)
b = rand(1)
c = rand(1)

if b^2-4*a*c<0
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```
        disp('No hay solución real')
else
        x1 = (-b+sqrt(b^2-4*a*c))/2/a;
        x2 = (-b-sqrt(b^2-4*a*c))/2/a;
        if x1==x2
                disp(['Hay solución única y es '
                        ↪ num2str(x1)])
        else
                disp(['Hay dos soluciones y son '
                        ↪ num2str(x2) ' y ' num2str(x1)])
        end
end
```

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## p13

```
% MODELO 1
function A = p13(A)
        m = size(A,1);
        for  ii = 1:(m/2)
                A([ii,m/2+ii], :) = A([m/2+ii,ii], :);
        end
end

% MODELO 2
function A = p13(A)
        m = size(A,1);
        for  ii = 1:(m/2)
                A(:,[ii,m/2+ii]) = A(:,[m/2+ii,ii]);
        end
end

% MODELO 3
function A = p13(A)
        m = size(A,1);
        for  ii = 1:2:m-1
                A([ii,ii+1], :) = A([ii+1,ii], :);
        end
end

% MODELO 4
function A = p13(A)
        m = size(A,1);
        for  ii = 1:2:m-1
                A(:,[ii,ii+1]) = A(:,[ii+1,ii]);
        end
end

% MODELO 5
function A = p13(A)
        m = size(A,1);
        for  ii = 1:2:m-1
                A([ii,ii+1], :) = A([ii+1,ii], :);
        end
end
```

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