

```
function d = dirac(x)
    d = [];
    for i = 1:length(x)
        d = [d, x(i) == 0];
    end
end
```

```
x = 1:20;
ys = [0.5, 1, 2];
yf = []
```

```
yf =
```

```
[]
```

```
for i = 1:3
    figure(i);
    scatter(x, filter(1, [1, -ys(i)], dirac(x), ys(i)));
    title(num2str(ys(i)) + "^k");
end
```



