```
function N = divDiff(x,y)
    n=size(y,1);
    N=y;
    for i=1:n-1
       N(i+1:n)=(N(i+1:n)-N(i:n-1))./ (x(i+1:n)-x(1:n-i));
    end
end

function p = hornerNewton(N,x,xi)
    n=size(x,1);

    p=N(n)*ones(size(xi));
    for i= n-1:-1:1
        p=p.*(xi-x(i))+N(i);
    end

end
```

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