

```
function res = linAppFn(x,w,width)
% LINAPPFN - Linearly approximate the target function at x when it is divided up into "n"
patches
% and "width" is an integer specifying HOW MANY patches should be placed over the center
of each
% node center
%
% Written by:
% --
% John L. Weatherwax          2008-02-19
%
% email: wax@alum.mit.edu
%
% Please send comments and especially bug reports to the
% above email address.
%
%-----

n = length(w);

res = 0.0;
for pti=1:n,
    if( abs( x - pti/n ) <= width/(2*n) )    % are we in the patch pti?
        res = res+w(pti)*1.0;               % add the weight at this point to our current
    result ... otherwise do nothing
    end
end
```