```
% Matt McDade
% ANM 2
% HW 1

function hw_1

    f = @(x) x^4 * exp(-0.1*x);
    x = 3.2;

    for h = 1./10.^[1:8]
        approx = fd1(f, x, h)
    end

    function a = fd1(f, x, h)
            a = (f(x+h)-f(x))/h;
    end

end
```

```
approx =
          91.1643001767409
approx =
          87.9188869829278
approx =
          87.5990648841736
approx =
          87.5671298662439
approx =
          87.5639368373981
approx =
          87.5636175550198
approx =
          87.5635855379642
approx =
           87.563580564165
```

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