warm up

find the polynomial equation

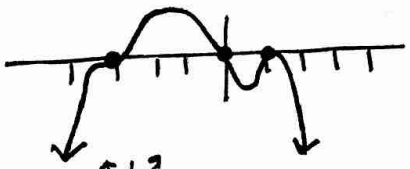
1. $f(1)=8$ & zeros at $x=-2$ (double), $x=-1$, $x=-3$ (fifth)

2. $f(-1)=3$ & zeros at $x=3$ (triple), $x=-4$

sketch the graph

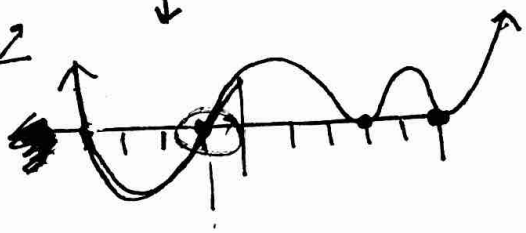
3. $f(x)=\underline{-2x}(x-1)^2(x+3)^5$ SW D:8

$x=0,1,-3$ LC:-2



4. $f(x)=(x-5)^2(x+4)^1(x-3)^2(x+1)^1$ D:6

D S D S LC:1



1. $f(x)=a(x+2)^2(x+1)(x+3)^5$

$8=a(1+2)^2(1+1)(1+3)^5$

$8=a(9)(2)(1024)$

$0.0004=a$

$f(x)=0.004(x+2)^2(x+1)(x+3)^5$

2. $f(x)=a(x-3)^3(x+4)$

$3=a(-1-3)^3(-1+4)$

$3=a(-64)(3)$

$-1/64=a$

$f(x)=-1/64(x-3)^3(x+4)$