## Remember to show all of your work.

Problem 1. (6 points) Find the first and second derivatives of the following function:

$$
f(x)=2 x^{5} e^{x}+3 x^{4}+\pi^{2}
$$

Problem 2. (4 points) Find the $x$ value(s) at which the following function has a horizontal tangent line:

$$
f(x)=x^{3}+10 x^{2}+12 x+7
$$

