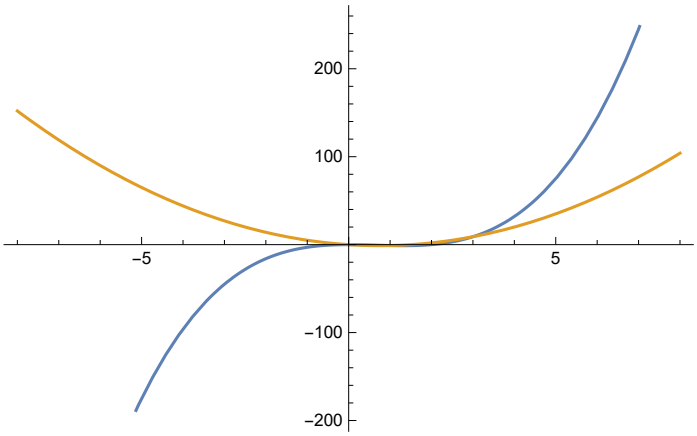
Assignment 1 No.5

5 i)

In[1]:=
```
f[x_] = x^3 - 2 x^2
```
Out[1]= $-2x^2 + x^3$

In[3]:=
```
g[x_] = 2 x^2 - 3 x
```
Out[3]= $-3x + 2x^2$

In[7]:=
```
Plot[{-2 x^2 + x^3, -3 x + 2 x^2}, {x, -8, 8}]
```
Out[7]=



5 ii)

In[8]:=
```
Solve[{x^3 - 2 x^2 == 2 x^2 - 3 x}, x]
```
Out[8]= $\{\{x \to 0\}, \{x \to 1\}, \{x \to 3\}\}$

5 iii)

In[9]:=
```
Integrate[x^3 - 4 x^2 + 3 x, {x, 1, 3}]
```
Out[9]= $-\frac{8}{3}$

In[10]:=
```
Integrate[f[x_] - g[x_], {x, 1, 3}]
```
Out[10]= $\int_1^3 \left(3 x\_ - 4 x\_^2 + x\_^3\right) \, dx$