

6. Given the function  $m(j)=2j^2+2j$  ,  
find an equation of the secant line containing  $(3,m(3))$   
and  $(4,m(4))$ . Express the equation in slope-intercept form.

$$b = -72 + 16j$$

$$b = 72 - 16j$$

$$b = -24 + 16j$$

$$b = -23 + 17j$$

### Solution

The line passing through the two points has the slope:

$$\begin{aligned} & \frac{m(4)-m(3)}{4-3} \\ &= \frac{(2(4)^2+2(4))-(2(3)^2+2(3))}{1} \\ &= \frac{40-24}{1} \\ &= 16 \end{aligned}$$

using one of the points, say  $(3,24)$  and the slope to get the equation of the secant line:

$$b-24 = 16(j-3)$$

The equation in slope-intercept form:

$$b = -24 + 16j$$