Lesson 52 - 2nd Fund. Thm.

1. $F'(x) = x - 1$
2. $F'(x) = x^2 + 2x + 3$
3. $F'(x) = (-2x^2 + 2) \cdot 2x = -4x^3 + 4x$
4. $F'(x) = (-(3x)^3 + 11(3x)^2 - 39(3x) + 99) \cdot 3$
   $= -81x^3 + 297x^2 - 351x + 132$
5. $F'(x) = \frac{3}{x^7}$
6. $F'(x) = -(2x - 2) + (-2x^2 - 2)(2x)$
   $= -4x^3 - 2x + 2$
7. $F'(x) = -x^2 + 8x - 11 + ((x^2)^2 - 8x^2 + 11)2x$
   $= 2x^5 - 16x^3 - x^2 + 30x - 11$
8. 0

Avg Value Theorem.

5. $\frac{10}{3}$
6. $\frac{7}{12}$
7. $\frac{8\sqrt{3}}{3}$
8. $\frac{-1}{6}$
9. $\frac{1}{6}$
10. -1
11. $\frac{-2}{3}$
12. -2