Name : _____ Score : _____

Teacher : _____ Date : _____

Second Fundamental Theorem of Calculus

Find F'(x) for each problem.

1) $F(x) = \int_{6}^{x} (5t)\,dt$

2) $F(x) = \int_{-9}^{x} (-6t + 4)\,dt$

3) $F(x) = \int_{-4}^{x} (6t^3 + 3t^2 + t + 3)\,dt$

4) $F(x) = \int_{4}^{x} (2t + 6)\,dt$

5) $F(x) = \int_{8}^{x} (6t^2 + 3t + 5)\,dt$

6) $F(x) = \int_{-10}^{x} (3t^3 + 2t^2 - 5t)\,dt$

7) $F(x) = \int_{-2}^{x} (5t^3 + t^2 - 2t - 4)\,dt$

8) $F(x) = \int_{3}^{x} (6t^3 + 4t^2 - t - 4)\,dt$

9) $F(x) = \int_{1}^{x} (-2t^2 - 5t - 5)\,dt$

10) $F(x) = \int_{-8}^{x} (5t^2 - 5t)\,dt$

11) $F(x) = \int_{10}^{x} (-6t - 5)\,dt$

12) $F(x) = \int_{-6}^{x} (-3t + 4)\,dt$

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$F'(x) = -6x + 4$

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$F'(x) = 6x^3 + 3x^2 + x + 3$

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$F'(x) = 2x + 6$

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