

## MATH 107-153 Recitation 3

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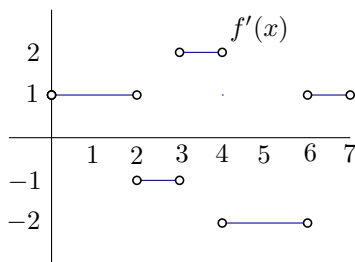
[www.math.unl.edu/~jnir2/107-153.html](http://www.math.unl.edu/~jnir2/107-153.html)

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**p. 304 #14:** Assume  $f'$  is given by the graph in Figure 6.13. Suppose  $f$  is continuous and that  $f(3) = 0$ .

- (a) Sketch a graph of  $f$ .
- (b) Find  $f(0)$  and  $f(7)$ .
- (c) Find  $\int_0^7 f'(x) dx$  in two different ways.



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**p. 130 #35:** Find an antiderivative  $F(x)$  with  $F'(x) = f(x) = 2 + 4x + 5x^2$  and  $F(0) = 0$ . Is there only one possible solution?

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**p. 130 #51:** Find the indefinite integral of  $\int \left( t\sqrt{t} + \frac{1}{t\sqrt{t}} \right) dt$ .

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**p. 130 #59:** Evaluate  $\int_1^2 \frac{1+y^2}{y} dy$  exactly [as in  $\ln(3\pi)$ ], using the Fundamental Theorem, and numerically [ $\ln(3\pi) \approx 2.243$ ].

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