

## Problem Set 82

2a.  $A = -2x^2 + 8x$   
 b. 8 units<sup>2</sup>

4.  $v(t) = -9.8t - 25$   
 $h(t) = -4.9t^2 - 25t + 100$   
 2.637 sec

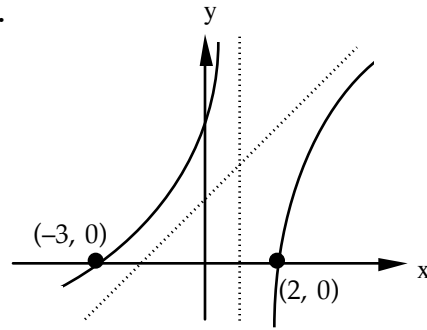
6. LEFT SIDE $f'(1) = 3$	RIGHT SIDE $\lim_{x \rightarrow 1^+} f'(x) = 2$
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8.  $a + b = 3$

10. -2

12.  $\pi \int_0^1 (-x^4 - x^2 + 2x) dx$

14a.  $y = x + 2; \quad x = 1$   
 b.



16. 0

18.  $\sin x - \frac{1}{3} \sin^3 x + C$

20.  $\frac{2^x}{\ln 2} + C$

22.  $2\sqrt{e^x + \sin x} + C$

24. C