

MATH 75B

Test 1 - Answers

1. C.

2. E.

3. C.

4. B.

5. E.

6. C.

7. (a) $y'(x) = \frac{4 - 2xy - y^3}{x^2 + 3xy^2}$

(b) $(-1)^2 \cdot 2 + (-1) \cdot 2^3 = 4 \cdot (-1) - 2$

(c) 0.

8. $90/\sqrt{37}$ km/h

9. $\log_{.945}(1/2)$

10. (a) $f'(x) = \frac{\arcsin(x)}{2\sqrt{x}} + \frac{\sqrt{x}}{\sqrt{1-x^2}}$

(b) $g'(x) = -\frac{1}{(1 + (\frac{1}{x})^2)x^2} = -\frac{1}{(x+1)^2}$

11. 0.5

12. max: $1/6$; min: -0.1