

MATH 140A
Fall Semester 2000
Exam I
September 18, 2000

ANSWERS:

1. (D); 2. (C); 3. (A); 4. (A); 5. (D); 6. (A); 7. (B); 8. (B); 9. (E); 10. (B); 11. (E); 12. (B).

13. a. (T); b. (T); c. (T); d. (F); e. (T); f. (F); g. (F); h. (F); i. (T); j. (F).

14. a. $f'(x) = \lim_{h \rightarrow 0} \frac{f(x+h) - f(x)}{h}$

b. $f'(x) = \frac{-a}{(ax+b)^2}$

15. Removable discontinuity at $x = 2$; Jump discontinuity at $x = 3$; Infinite discontinuity at $x = 4$; ($x = 5$ is not a discontinuity: it is not within the domain of the given part of the function.)

16. $a = 5, b = 12, c = -1$.