

ANSWERS TO PRACTICE EXAM #2

1a. $(e^{-x^2+3})(-2x)$ 1b. 20

2a. $(y+2) = -\frac{27}{11}(x-3)$

2b. $y' = x^{x^2} (2x \ln x + x)$

3a. See EXAMPLE 3 ON PAGE 159

3b. $6/5$

4a. 10, 15

4b.

$\int [2x^5 \sin x^3 + x^2 (\cos x^3) (3x^2)] dx$
 ~~$\int [2x^4 \sin x^3 + 3x^2 \cos x^3] dx$~~

5a. Max $f(0) = f(1) = 0$
 Min $f(-1) = -2$

5b. Max $f(0) = 9 = f(3)$

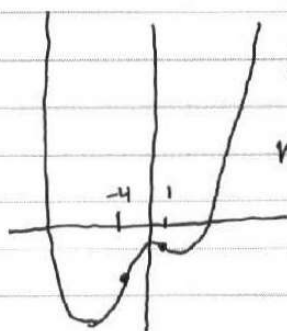
Min $f(1) = 5$

6. $C = 3^{2/3}$

7. 11 AM

8a. $f'(u) = 0$ $u = 0, -6.38, 1.88$

$f''(u) = 0$ $u = -4, 1$



↑
INFLECTIONS

REL MIN $u = -6.38$

~~$u = 1.881$~~

REL MAX $u = 0$

DEC $(-\infty, -6.38) \cup (0, 1.881)$

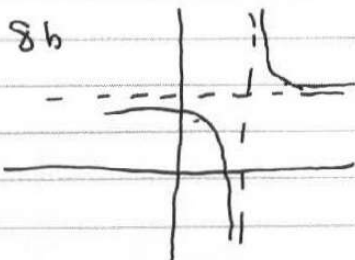
INC $(-6.38, 0) \cup (1.881, \infty)$

CC UP $(-\infty, -4) \cup (1, \infty)$

CC DOWN $(-4, 1)$

9. 0 (just PLUG IN)

10. WORKED IN TEXT



ALWAYS DEC

CC UP $x > 2$

CC DOWN $x < 2$

HA $y = 3$

VA $x = 2$

~~8a, 8d, f, g, h, 4, 5~~
~~NOT ON TEST~~