

Math 116 Practice Final Answers

1)

a) $(-4, 4\sqrt{3})$

b) $(15, \frac{\pi}{2})$ is one possible answer

2) a) $2x^2 + 3x^2 \ln(8x^2)$

b) $\frac{2e^{2x}}{1 + e^{4x}}$

3)

a) $y - 1 = -\frac{2}{11}(x - 20)$ is one possible answer.

4)

a) $\frac{2\sqrt{46}}{25}$

b) Cowboys (in terms of sheer money)

5) a) $\int_0^{\ln(8)} \sqrt{(e^t \cos(t) - e^t \sin(t))^2 + (e^t \sin(t) + e^t \cos(t))^2} dt$

b) $7\sqrt{2}$.

6) Divergent

7) $\frac{1}{6}(-9\sqrt{3} + 5\pi)$.

8) a) $c = 5$

b) $R = 2$

9) $[3, 7]$ (converges by integral test at $x = 7$)

10) a) $\frac{32768}{350625}$

b) e^{-169}

11) a) 42

b) e^3