

22M:025 Practice Test Answers

The answers here are provided to check your work, not to explain how to do the problems. We will go over the practice test during finals week, so try to solve everything and we'll talk about ones you could not solve. This was done very quickly so that these are available ASAP – it is possible an answer is wrong – I will check the solutions over the weekend.

1. $\frac{1+x(x^2+1)^{-\frac{1}{2}}}{x+(x^2+1)^{\frac{1}{2}}} + \frac{2}{(1-(2x)^2)^{\frac{1}{2}}}$

2. $\frac{-y \cos^2 y}{(x \cos^2 y)+1}$

3. $+\infty$

4. Min: 1, Max: 2

5. $f'(0) = 0$

6. $\frac{2}{5} + \frac{1}{2}e^2$

7. $-2x^{-3} \cos x^{-4}$

8. $\ln x + \frac{1}{2} \sin^2 x$

9. $1 - \cos 1$

10. $\frac{1}{24}$