Discussion Problems for Math 180

Tuesday, November 11, 2014

1. What is $\lim\limits_{x \to 0} \dfrac{\tan 3x}{\tan 5x}$?

2. What is $\lim\limits_{x \to \infty} x - \sqrt{x^2 + 1}$?

3. What is $\lim\limits_{x \to 0^+} (2x)^{3x}$?

4. What is $\lim\limits_{x \to 0} \dfrac{\sin(x)}{1 - \cos(x)}$?

5. What is $\lim\limits_{x \to 0} \dfrac{4x^2 - 3x + 7}{8x - 3}$?

6. What is $\displaystyle\int \sin(x)\,dx$?

7. What is $\displaystyle\int 4x^2 + 7\,dx$?

8. What is $\displaystyle\int e^{4x}\,dx$?

9. What is $\displaystyle\int \dfrac{4}{3x}\,dx$?

10. What is $\displaystyle\int \dfrac{2}{1 + x^2}\,dx$?