

MAT 115 Worksheet 13
Tuesday, Nov 14 2017

Important info: Welcome to the MAT 115 workshop! My name is **Diego Avalos** (avalosgalvez@cpp.edu), and I will be your workshop facilitator. We meet on Tuesdays and Thursdays from 4 to 5:50 pm in room 4-1-314. My office hour is on Mondays from 11:30 am to 12:30 pm in room 94-219. All worksheets and solutions may be found at the website www.diegoavalos.net/teaching/mat115workshop2017.

Evaluate the following integrals using partial fraction decomposition.

1. $\int \frac{1}{x^2 - 3x - 4} dx$

5. $\int \frac{3x^2 - 10}{x^2 - 4x + 4} dx$

9. $\int \frac{2x^2 - 10x + 4}{(x + 1)(x - 3)^2} dx$

2. $\int \frac{11x + 17}{2x^2 + 7x - 4} dx$

6. $\int \frac{2x - 3}{x^2 - 3x - 10} dx$

10. $\int \frac{x^2}{(x + 1)^3} dx$

3. $\int \frac{2x^2 - 9x - 9}{x^3 - 9x} dx$

7. $\int \frac{x^5 + x^2 + 2}{x^3 - x} dx$

11. $\int \frac{2x^2 - 1}{(4x - 1)(x^2 + 1)} dx$

4. $\int \frac{x^2 - 8}{x + 3} dx$

8. $\int \frac{2x^2 + 3}{x(x - 1)^2} dx$

12. $\int \frac{x^3 + 3x^2 + x + 9}{(x^2 + 1)(x^2 + 3)} dx$