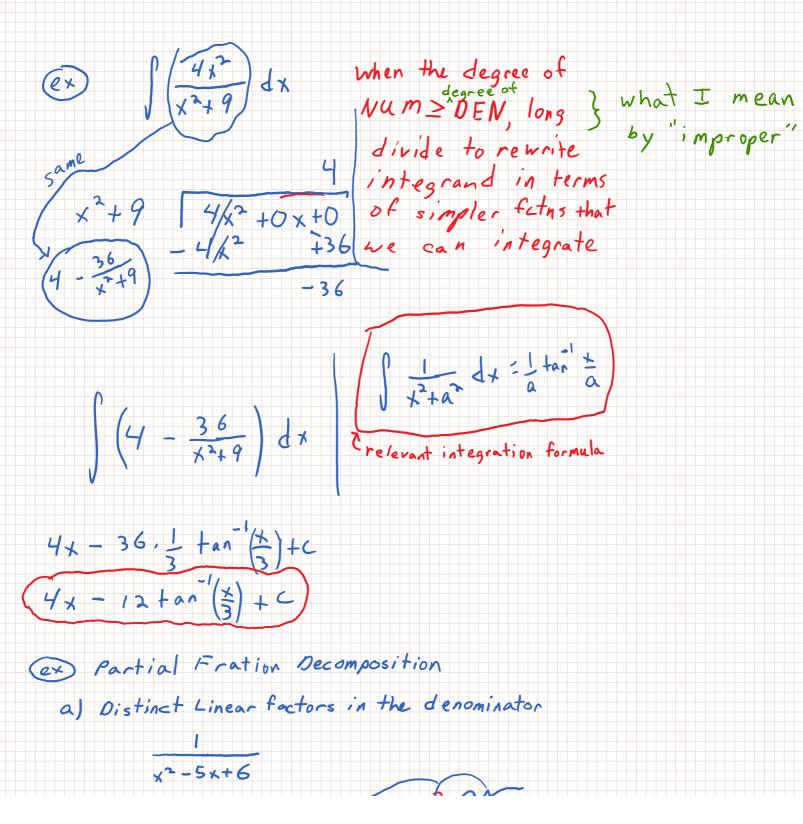
## Section 7.4: Integration of Rational

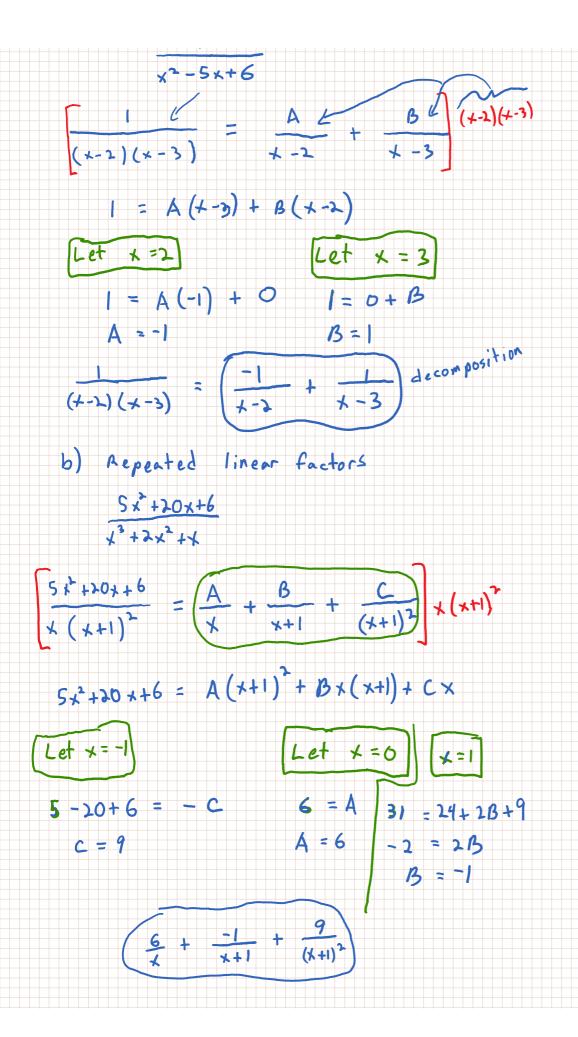
## Functions

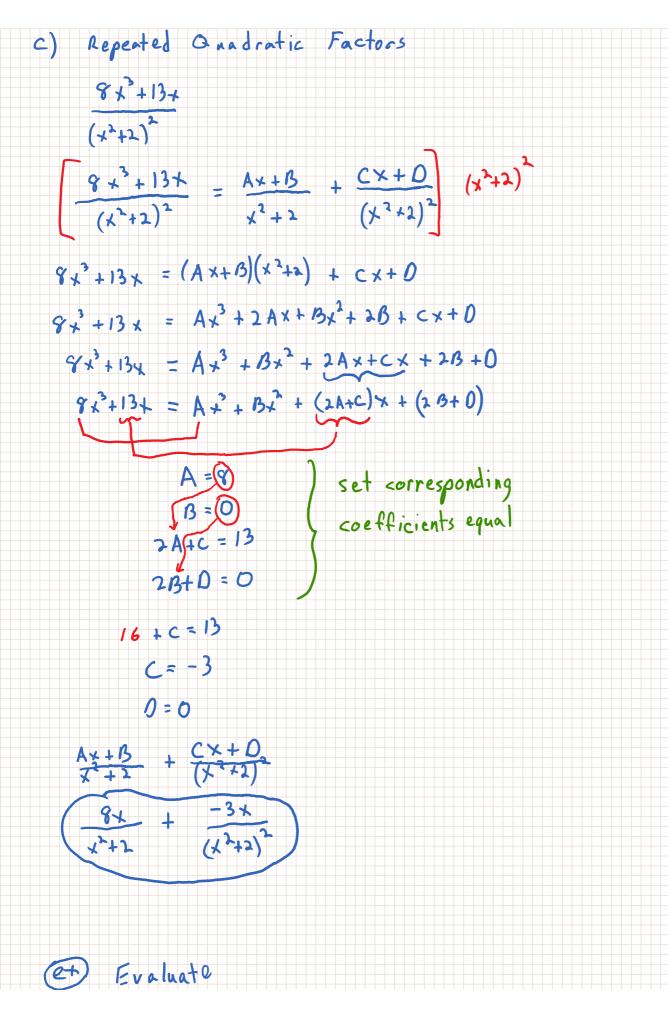
Friday, January 24, 2014 1:26 PM

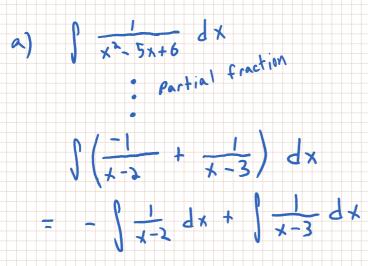
## Goals:

- 1. To integrate "improper" rational functions after performing long division.
- 2. To integrate rational functions after performing partial fraction decomposition

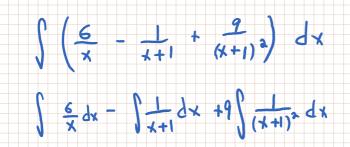


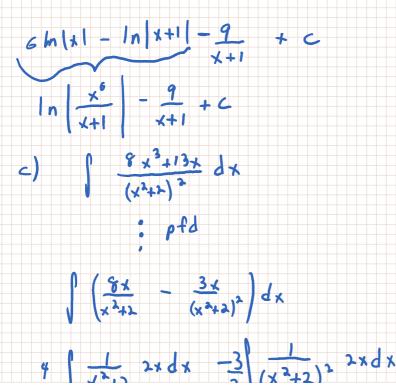






- $= \ln |x-2| + \ln |x-3| + c$
- 6)  $\int \frac{5 \times ^{2} + 20 \times + 6}{\times ^{3} + 2 \times ^{2} + \times} dx$ : pfd





 $4 \int \frac{1}{x^{2}+2} 2x dx -\frac{3}{2} \int \frac{1}{(x^{2}+2)^{2}} 2x dx$  $4 \ln |x^{2}+2| + \frac{3}{2} \cdot (x^{2}+2)^{2} + c$ 

 $4|n|x^{2}+2|+\frac{3}{2(x^{2}+2)}+C$