

6.10 Integrating with Long Division and Completing the Square

Calculus

Name: _____

CA #2

Find the indefinite integral.

1. $\int \frac{1}{x^2-4x+5} dx$

2. $\int \frac{1}{\sqrt{-x^2-10x-24}} dx$

3. $\int \frac{10x^2-24x+12}{5x-2} dx$

4. $\int \frac{8}{x^2+14x+53} dx$

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

6. $\int \frac{42x^2 - 10x - 90}{7x + 10} dx$

Answers to 6.10 CA #2

1. $\tan^{-1}(x - 2) + C$	2. $\sin^{-1}(x + 5) + C$	3. $x^2 - 4x + \frac{4}{5} \ln 5x - 2 + C$
4. $4 \tan^{-1}\left(\frac{x+7}{2}\right) + C$	5. $2x^2 + 8x + 16 \ln x - 2 + C$	6. $3x^2 - 10x + \frac{10}{7} \ln 7x + 10 + C$