

HW1 Answers

p.208 #4.

$$\frac{3 - 2x + x^4}{2x^2} + C$$

p.208 #6.

$$\begin{aligned}f(x) &= 4x \cos^2(x) \\f'(x) &= 4 \cos(x)(\cos(x) - 2x \sin(x)) \\f\left(\frac{\pi}{4}\right) &= \frac{\pi}{2} \\f'\left(\frac{\pi}{4}\right) &= 2 - \pi\end{aligned}$$

p.208 #17.

$$\begin{aligned}f(x) &= 2x^{15} \\C &= -\frac{1}{9}\end{aligned}$$

p.209 #21.

$$f(x) = \frac{2x^{13}}{1+x^8} - \frac{3x^{20}}{1+x^{12}}.$$

p.209 #26.

- (a) impossible
- (b) possible
- (c) impossible
- (d) possible