

HW2 Answers

p.216 #14.

$$-\frac{1}{3}\sqrt{1-x^6} + C$$

p.216 #18.

$$\frac{3}{2}(\sin x - \cos x)^{2/3} + C$$

p.217 #23. Let

$$F(x) = \int_x^1 \frac{dt}{1+t^2} - \int_1^{1/x} \frac{dt}{1+t^2}.$$

Then $F(1) = 0$ and $F'(x) = 0$. From this we conclude that $F(x) = 0$.

p.220 #6.

$$\frac{1}{8}(\sin(2x) - 2x \cos(2x)) + C$$

p.221 #12. Good job.

p.236 #18.

$$\frac{x^2}{4}(2 \log(x) - 1) + C$$

p.236 #19.

$$\frac{x^2}{4}(2 \log^2(x) - 2 \log(x) + 1) + C$$

p.237 #24.

$$\log |\log x| + C$$