Jang Ding

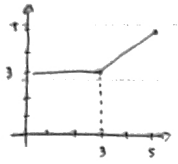
Math Homework 9.2C

48. $\int_2^8 f(x)\,dx - \int_2^4 f(x)\,dx = \int_4^8 f(x)\,dx$

$= 1.4$

79. $\int_0^1 \left(\frac{1}{1+x^2}\right) dx$

50.



$\int_0^5 f(x)\,dx = \int_0^3 f(x)\,dx + \int_3^5 f(x)\,dx$

$= 9 + 8$

$= 17$

52. F(2) All other values are negative, and F(2) = 0

58. $\frac{\pi}{6} \le x \le \frac{\pi}{3}$

$\sin\frac{\pi}{6} \le \sin x \le \sin\frac{\pi}{3}$

$\frac{1}{2} \le \sin x \le \frac{\sqrt{3}}{2}$

$\int_{\pi/6}^{\pi/3} \frac{1}{2} \le \int_{\pi/6}^{\pi/3} \sin x \le \int_{\pi/6}^{\pi/3} \frac{\sqrt{3}}{2}$

$\frac{\pi}{12} \le \int_{\pi/6}^{\pi/3} \sin x\,dx \le \int_{\pi/6}^{\pi/3} \frac{\pi\sqrt{3}}{12}$

60. $\int_0^3 \frac{1}{x+4}\,dx$

$\frac{1}{7} \le f(x) \le \frac{1}{4} \quad x \in [0,3]$

$\frac{3}{7} \le \int_0^3 \frac{1}{x+4}\,dx \le \frac{3}{4}$

66. $\int_a^b x\,dx = \frac{b^2-a^2}{2}$

$\int_a^b f(x)\,dx \ge \int_a^b g(x)\,dx$

$\int_0^{\pi/2} x\sin x\,dx \le \int_0^{\pi/2} x\,dx$

$\int_0^{\pi/2} x\sin x\,dx \le \frac{(\frac{\pi}{2})^2}{2}$

$\int_0^{\pi/2} x\sin x\,dx \le \frac{\pi^2}{8}$