#39	Pág 390	#47

$$\int_a^b f(x)\,dx = \int_{-2}^{2} f(x)\,dx + \int_{2}^{5} f(x)\,dx - \int_{-2}^{-1} f(x)\,dx$$

$$\int_{-2}^{2} f(x)\,dx + \int_{2}^{5} f(x)\,dx - \int_{-2}^{-1} f(x)\,dx = \int_{-2}^{5} f(x)\,dx + \int_{-1}^{-2} f(x)\,dx$$

$$\int_{-1}^{5} f(x)\,dx$$

$$\boxed{\int_{-1}^{5} f(x)\,dx}$$

#40	Pág 390	#57

$$2 \leq \int_{-1}^{1} \sqrt{1+x^2}\,dx \leq 2\sqrt{2}$$

$-1 \leq x \leq 1$; $0 \leq x^2 \leq 1$

$1 \leq 1+x^2 \leq 2$; $1 \leq \sqrt{1+x^2} \leq \sqrt{2}$

$$\boxed{\begin{gathered} 1[1-(-1)] \leq \int_{-1}^{1} \sqrt{1+x^2}\,dx \leq \sqrt{2}\,[1-(-1)] \\ 2 \leq \int_{-1}^{1} \sqrt{1+x^2}\,dx \leq 2\sqrt{2} \end{gathered}}$$

#41	Pág 391	#74

$$\lim_{n\to\infty} \sum_{i=1}^{n} \frac{1}{1+\left(\frac{i}{n}\right)^2}$$

$\Delta x = \frac{(1-0)}{n} = \frac{1}{n}$; $x_i = 0 + i\Delta x = \frac{i}{n}$

$$\lim_{n\to\infty} \sum_{i=1}^{n} \frac{1}{1+\left(\frac{i}{n}\right)^2} = \lim_{n\to\infty} \sum_{i=1}^{n} \frac{1}{1+\left(\frac{i}{n}\right)^2} \cdot \frac{1}{n} = \lim_{n\to\infty} \sum_{i=1}^{n} f(x_i)\,\Delta x \quad f(x) = \frac{1}{1+x^2}$$

$$= \int_0^1 \frac{dx}{1+x^2}$$

$$\boxed{\int_0^1 \frac{dx}{1+x^2}}$$

#42	Pág 399	#4

$$g(x)=\int_0^x f(t)\,dt$$

a) $g(x)=\int_0 f(t)\,dt \rightarrow g(0)=0$

$g(6)=0$

b) $g(1)=2.8$

$g(2)=4.9$

$g(3)=5.7$

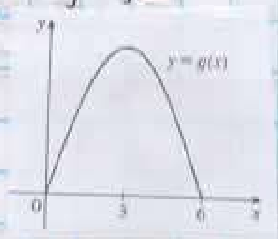
$g(4)=g(3)-g(2)=0.8$

$g(5)=2.8$

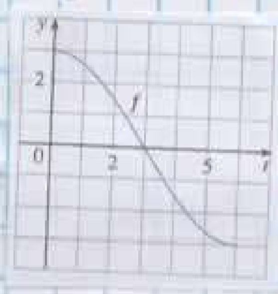
c) En el intervalo de $(0,3)$

d) g tiene un máximo valor en $x=3$

e) $y=g(x)$



f



f) El gráfico de g estima pendientes en el gráfico g obteniendo un gráfico que se parece a f

#43	Pág 399	#7

$$g(x)=\int_0^x \sqrt{t+t^3}\,dt$$

$$\boxed{g'(x)=f(x)=\sqrt{x+x^3}}$$

$$g(x)=\int_0^x \sqrt{t+t^3}\,dt \rightarrow g'(x)=f(x)=\sqrt{x+x^3}$$

#44	Pág 399	#11

$$F(x)=\int_x^0 \sqrt{1+\sec t}\,dt$$

$$F(x)=\int_x^0 \sqrt{1+\sec t}\,dt=-\int_0^x \sqrt{1+\sec t}\,dt \rightarrow F'(x)=-\frac{d}{dx}\int_0^x \sqrt{1+\sec t}\,dt=-\sqrt{1+\sec x}$$

$$\boxed{F'(x)=-\sqrt{1\ \sec x}}$$

#45	Pág 400	#18

$$y=\int_{1-3x}^{1} \frac{u^3}{1+u^2}\,du$$

$$y'=\frac{d}{dx}\left(\int_{1-3x}^{1} \frac{u^3}{1+u^2}\,du\right) \rightarrow y'=\frac{d}{dx}\cdot\int_1^{1-3x} \frac{u^3}{1+u^2}\,du \longrightarrow$$

$$y' = \frac{d}{dx}\int_1^{1-3x} -\frac{u^3}{1+u^2}\,du \to y' = \frac{d}{dx}\int_1^{u} -\frac{u^3}{1+u^2}\,du \to y' = \frac{d}{du}\int_1^{u} -\frac{u^3}{1+u^2}\,du\left(\frac{du}{dx}\right)$$

$$y' = \frac{-u^3}{1+u^2}\,\frac{d}{dx}u \to y' = -\frac{(1-3x)^3}{1(1-3x)^2}\,\frac{d}{dx}(1-3x) \to y' = -\frac{(1-3x)^3}{1(1-3x)^2}(-3)$$

$$y' = \frac{3-27x+81x^2-81x^3}{2-6x+9x^2}$$

$$\boxed{y' = \frac{3-27x+81x^2-81x^3}{2-6x+9x}}$$

#46	Pág 400	#19

$$\int_1^3 (x^2+2x-4)\,dx$$

$$\boxed{\int_1^3 (x^2+2x-4)\,dx = \left[\tfrac{1}{3}x^3+x^2-4\right]_1^3 = (9+2-12)\cdot\left(\tfrac{1}{3}+1-4\right) = 6+\tfrac{8}{3} = \tfrac{26}{3}}$$

#47	Pág 400	#27

$$\int_0^2 x(2+x^5)\,dx$$

$$\int_0^2 x(2+x^5)\,dx \to \int x(2+x^5)\,dx = \int 2x+x^6\,dx = \int 2x\,dx + \int x^6\,dx$$

$$x^2+\frac{x^7}{7} = \left[x^2+\frac{x^7}{7}\right]_0^2 = 2^2+\frac{2^7}{7}-\left(0^2+\frac{0^7}{7}\right) = \frac{156}{7}$$

$$\boxed{\int_0^2 x(2+x^5)\,dx = \frac{156}{7} \approx 22.29}$$

#48	Pág 400	#35

$$\int_1^2 \frac{v^3+3v^6}{v^4}\,dv$$

$$\int_1^2 \frac{v^3+3v^6}{v^4}\,dv = \int_1^2\left(\frac{1}{v}+3v^2\right)dv = \left[\ln|v|+v^3\right]_1^2 = (\ln 2+8)-(\ln 1+1) = \ln 2+7$$

$$\boxed{\int_1^2 \frac{v^3+3v^6}{v^4}\,dv = \ln 2+7 \approx 7.69315}$$

#49	Pág 400	#37

$$\int_0^1 (x^e + e^x)\,dx$$

$$\int_0^1 (x^e+e^x)\,dx = \left[\frac{x^{e+1}}{e+1} + e^x\right]_0^1 = \left(\frac{1}{e+1} + e\right) - (0+1) = \frac{1}{e+1} + e - 1$$

$$\boxed{\int_0^1 (x^e+e^x)\,dx = \frac{1}{e+1} + e - 1 \approx 1.98722}$$

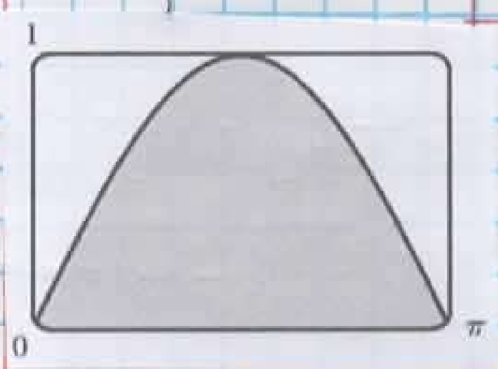
#50	Pág 400	#40

$$\int_1^3 \frac{y^3-2y^2-y}{y^2}\,dy$$

$$\int_1^3 \frac{y^3-2y^2-y}{y^2}\,dy = \int_1^3 \left(y-2-\frac{1}{y}\right)dy = \left[\frac{1}{2}y^2 - 2y - \ln|y|\right]_1^3 = \left(\frac{9}{2}-6-\ln 3\right) - \left(\frac{1}{2}-2-0\right) = -\ln 3$$

$$\boxed{\int_1^3 \frac{y^3-2y^2-y}{y^2}\,dy = -\ln 3 \approx -1{,}09861}$$

#51	Pág 400	#51



$\frac{2}{3}\pi = 2.1$

$y = \operatorname{Sen} x \,;\ 0 \leq x \leq \frac{\pi}{3}$

$$\int_0^{\pi} \operatorname{sen} x\,dx = [-\cos x]_0^{\pi} = (-\cos \pi) - (-\cos 0)$$

$$-(-1) + 1 = 2$$

El área es de 2

#52	Pág 400	#60

$$g(x) = \int_{1-2x}^{1+2x} t \operatorname{sen} t\,dt$$

$$g(x) = \int_{1-2x}^{1+2x} t \operatorname{sen} t\,dt = \int_{1-2x}^{0} t \operatorname{sen} t\,dt + \int_0^{1+2x} t \operatorname{sen} t\,dt = -\int_0^{1-2x} t \operatorname{sen} t\,dt + \int_0^{1+2x} t \operatorname{sen} t\,dt$$

$$g'(x) = -(1-2x)\,\text{sen}(1-2x)\cdot\frac{d}{dx}(1-2x) + (1+2x)\,\text{sen}(1+2x)\cdot\frac{d}{dx}(1+2x)$$

$$= 2(1-2x)\,\text{sen}(1-2x) + 2(1+2x)\,\text{sen}(1+2x)$$

$$\boxed{g'(x) = 2(1-2x)\,\text{sen}(1-2x) + 2(1+2x)\,\text{sen}(1+2x)}$$

#53	Pág 400	#63

$$y = \int_{\cos x}^{\text{sen}\,x} \ln(1+2v)\,dv$$

$$y = \int_{\cos x}^{\text{sen}\,x} \ln(1+2v)\,dv = \int_{\cos x}^{0} \ln(1+2v)\,dv + \int_{0}^{\text{sen}\,x} \ln(1+2v)\,dv = -\int_{0}^{\cos x} \ln(1+2v)\,dv + \int_{0}^{\text{sen}\,x} \ln(1+2v)\,dv$$

$$y' = -\ln(1+2\cos x)\frac{d}{dx}\cos x + \ln(1+2\,\text{sen}\,x)\frac{d}{dx} = \text{sen}\,x\ln(1+2\cos x) + \cos x\ln(1+2\,\text{sen}\,x)$$

$$\boxed{y' = \text{sen}\,x\ln(1+2\cos x) + \cos x\ln(1+2\,\text{sen}\,x)}$$

#54	Pág 401	#75

$$\lim_{n\to\infty}\sum_{i=1}^{n}\left(\frac{i^4}{n^5}+\frac{i}{n^2}\right) \qquad [0,1]$$

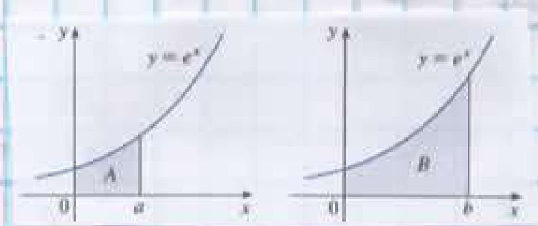
$$\lim_{n\to\infty}\sum_{i=1}^{n}\left(\frac{i^4}{n^5}-\frac{i}{n^2}\right) = \lim_{n\to\infty}\sum_{i=1}^{n}\left(\frac{i^4}{n^4}+\frac{i}{n}\right)\frac{1}{n} = \lim_{n\to\infty}\frac{1-0}{n}\sum_{i=1}^{n}\left[\left(\frac{i}{n}\right)^4+\frac{i}{n}\right] = \int_0^1 (x^4+x)\,dx$$

$$= \left[\frac{1}{5}x^5+\frac{1}{2}x^2\right]_0^1 = \left(\frac{1}{5}+\frac{1}{2}\right) - 0 = \frac{7}{10} \approx 0.7$$

$$\boxed{\lim_{n\to\infty}\sum_{i=1}^{n}\left(\frac{i^4}{n^5}+\frac{i}{n^2}\right) = \frac{7}{10} \approx 0.7}$$

#55	Pág 401	#84

$B = 3A$



$$\int_0^b e^x\,dx = 3\int_0^a e^x\,dx \to [e^x]_0^b = 3[e^x]_0^a$$

$$e^b - 1 = 3(e^a - 1) \to e^b = 3e^a - 2$$

$$b = \ln(3e^a - 2)$$

$$\boxed{b = \ln(3e^a - 2)}$$

#56	Pág 409	#8

$$\int\left(u^6-2u^5-u^3+\frac{2}{7}\right)du$$

$$\int\left(u^6-2u^5-u^3+\frac{2}{7}\right)du \to =\frac{1}{7}u^7-2\frac{1}{6}u^6-\frac{1}{4}u^4+\frac{2}{7}u+C=\frac{1}{7}u^7-\frac{1}{3}u^6-\frac{1}{4}u^4+\frac{2}{7}u+C$$

$$\boxed{\frac{1}{7}u^7-\frac{1}{3}u^6-\frac{1}{4}u^4+\frac{2}{7}u+C}$$

#57	Pág 409	#18

$$\int\frac{\operatorname{sen}2x}{\operatorname{sen}x}dx$$

$$\int\frac{\operatorname{sen}2x}{\operatorname{sen}x}dx=\int\frac{2\operatorname{sen}x\cos x}{\operatorname{sen}x}dx=\int 2\cos x\,dx=2\operatorname{sen}x+C$$

$$\boxed{\int\frac{\operatorname{sen}2x}{\operatorname{sen}x}dx=2\operatorname{sen}x+C}$$

#58	Pág 409	#29

$$\int_1^4\left(\frac{4+6u}{\sqrt{u}}\right)du$$

$$\int_1^4\left(\frac{4+6u}{\sqrt{u}}\right)du=\int_1^4\left(\frac{4}{\sqrt{u}}+\frac{6u}{\sqrt{u}}\right)du=\int_1^4\left(4u^{-1/2}+6u^{1/2}\right)du=\left[8u^{1/2}+4u^{3/2}\right]_1^4$$

$$(16+32)-(8+4)=36$$

$$\boxed{\int_1^4\left(\frac{4+6u}{\sqrt{u}}\right)du=36}$$

#59	Pág 409	#37

$$\int_0^{\pi/4}\frac{1+\cos^2\theta}{\cos^2\theta}d\theta \to \int_0^{\pi/4}\frac{1+\cos^2\theta}{\cos^2\theta}d\theta=\int_0^{\pi/4}\left(\frac{1}{\cos^2\theta}+\frac{\cos^2\theta}{\cos^2\theta}\right)d\theta=\int_0^{\pi/4}(\sec^2\theta+1)\,d\theta$$

$$[\tan\theta+\theta]_0^{\pi/4}=\left(\tan\frac{\pi}{4}+\frac{\pi}{4}\right)-(0+0)=1+\frac{\pi}{4}$$

$$\boxed{\int_0^{\pi/4}\frac{1+\cos^2\theta}{\cos^2\theta}d\theta=1+\frac{\pi}{4}\approx 1.7854}$$

#60 Pág 409 #43

$$\int_0^{1/\sqrt{3}} \frac{t^2-1}{t^4-1}\,dt \qquad \int_0^{1/\sqrt{3}} \frac{t^2-1}{t^4-1}\,dt = \int_0^{1/\sqrt{3}} \frac{t^2-1}{(t^2+1)(t^2-1)}\,dt$$

$$\int_0^{1/\sqrt{3}} \frac{1}{t^2+1}\,dt = \left[\arctan t\right]_0^{1/\sqrt{3}} = \arctan\left(\frac{1}{\sqrt{3}}\right) - \arctan 0 \Rightarrow \frac{\pi}{6} - 0 = \frac{\pi}{6}$$

$$\boxed{\int_0^{1/\sqrt{3}} \frac{t^2-1}{t^4-1}\,dt = \frac{\pi}{6}}$$

#61 Pág 409 #44

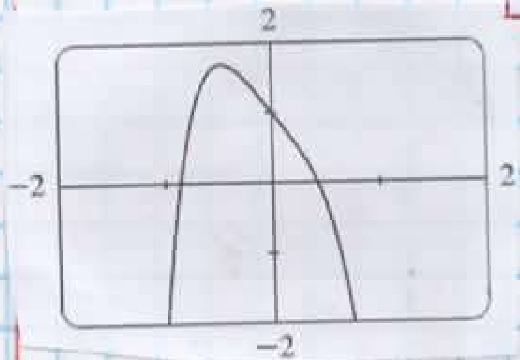
$$\int_0^2 |2x-1|\,dx \to |2x-1| = \begin{cases} 2x-1 & \text{si } 2x-1 \geq 0 \\ -(2x-1) & \text{si } 2x-1 < 0 \end{cases} = \begin{cases} 2x-1 & \text{si } x \geq \frac{1}{2} \\ 1-2x & \text{si } x < \frac{1}{2} \end{cases}$$

$$\int_0^2 |2x-1|\,dx = \int_0^{1/2} (1-2x)\,dx + \int_{1/2}^2 (2x-1)\,dx = \left[x - x^2\right]_0^{1/2} + \left[x^2 - x\right]_{1/2}^2$$

$$= \left(\frac{1}{2} - \frac{1}{4}\right) - 0 + (4-2) - \left(\frac{1}{4} - \frac{1}{2}\right) = \frac{1}{4} + 2 - \left(-\frac{1}{4}\right) = \frac{5}{2}$$

$$\boxed{\int_0^2 |2x-1|\,dx = \frac{5}{2} \approx 2.5}$$

#62 Pág 409 #47



$$y = 1 - 2x - 5x^4 \qquad x = a \approx -0.86 \qquad x = b \approx 0.42$$

$$\int_a^b (1 - 2x - 5x^4)\,dx = \left[x - x^2 - x^5\right]_a^b$$

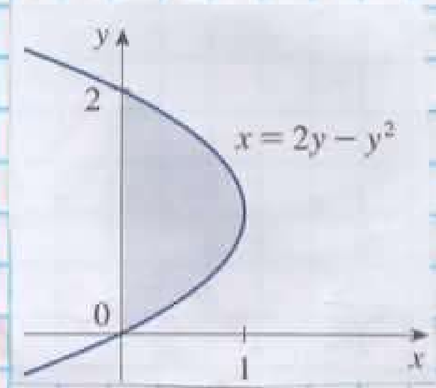
$$(b - b^2 - b^5) - (a - a^2 - a^5) \approx 1.36$$

$$\boxed{1.36}$$

#63	Pág 409	#49

$x = 2y - y^2$

$\int_0^2 (2y - y^2)\, dy \;;\; x = 2y - y^2 \rightarrow y = 0,\; y = 2$



$A = \int_0^2 (2y - y^2)\, dy$

$\left[y^2 - \frac{1}{3}y^3\right]_0^2 = \left(4 - \frac{8}{3}\right) - 0 = \frac{4}{3}$

$\boxed{A = \int_0^2 (2y - y^2)\, dy = \frac{4}{3} \approx 1.33}$

#64	Pág 410	#63

$r(t) = 200 - 4t \qquad 0 \leq t \leq 50 \qquad$ 10 minutos

$\int_0^{10} r(t)\, dt = \int_0^{10} (200 - 4t)\, dt = \left[200t - 2t^2\right]_0^{10} = (2000 - 200) - 0 = 1800$

$\boxed{\text{1800 litros en los primeros 10 minutos}}$

#65	Pág 418	#7

$\int x\sqrt{1 - x^2}\, dx \qquad u = 1 - x^2 \;;\; du = -2x\, dx \;;\; x\, dx = -\frac{1}{2} du$

$\int x\sqrt{1 - x^2}\, dx = \int \sqrt{u}\left(-\frac{1}{2} du\right) = -\frac{1}{2}\left(\frac{2}{3}u^{3/2}\right) + C = -\frac{1}{3}(1 - x^2)^{3/2} + C$

$\boxed{-\frac{1}{3}(1 - x^2)^{3/2} + C}$

#66	Pág 419	#19

$u = 3ax + bx^3 \;;\; du = (3a + 3bx^2)\, dx = 3(a + bx^2)\, dx$

$\int \frac{a + bx^3}{\sqrt{3ax + bx^3}}\, dx \Rightarrow \int \frac{a + bx^3}{\sqrt{3ax + bx^3}}\, dx = \int \frac{\frac{1}{3} du}{u^{1/2}} = \frac{1}{3}\int u^{-1/2}\, du$

$\frac{1}{3} 2u^{1/2} + C = \frac{2}{3}\sqrt{3ax + bx^3} + C$

$\boxed{\frac{2}{3}\sqrt{3ax + bx^3} + C}$

#67	Pág 419	#25

$u = 1+e^x$; $du = e^x\,dx$

$$\int e^x\sqrt{1+e^x}\,dx$$

$$\int e^x\sqrt{1+e^x}\,dx = \int\sqrt{u}\,du = \frac{2}{3}u^{3/2}+C = \frac{2}{3}(1+e^x)^{3/2}+C$$

$u = \sqrt{1+e^x}$; $u^2 = 1+e^x$; $2u\,du = e^x\,du$

$$\int e^x\sqrt{1+e^x}\,dx = \int u\cdot 2u\,du = \frac{2}{3}u^3+C = \frac{2}{3}(1+e^x)^{3/2}+C$$

$$\boxed{\int e^x\sqrt{1+e^x}\,dx = \frac{2}{3}(1+e^x)^{3/2}+C}$$

#68	Pág 419	#29

$u = 5^t$; $du = 5^t\ln 5\,dt$

$5^t\,dt = \frac{1}{\ln 5}du$

$$\int 5^t\,\text{sen}(5^t)\,dt$$

$$\int 5^t\,\text{sen}(5^t)\,dt = \int \text{sen}\,u\left(\frac{1}{\ln 5}du\right) = -\frac{1}{\ln 5}\cos u + C = -\frac{1}{\ln 5}\cos(5^t)+C$$

$$\boxed{\frac{1}{\ln 5}\cos(5^t)+C}$$

#69	Pág 419	#38

$u = 1+\tan t$; $du = \sec^2 t\,dt$

$$\int\frac{dt}{\cos^2 t\sqrt{1+\tan t}}$$

$$\int\frac{dt}{\cos^2 t\sqrt{1+\tan t}} = \int\frac{\sec^2 t\,dt}{\sqrt{1+\tan t}} = \int\frac{du}{\sqrt{u}} = \int u^{-1/2}du = \frac{u^{1/2}}{1/2}+C = 2\sqrt{1+\tan t}+C$$

$$\boxed{2\sqrt{1+\tan t}+C}$$

#70	Pág 419	#44

$u = x^2$; $du = 2x\,dx$

$$\int\frac{x}{1+x^4}dx \to \int\frac{x}{1+x^4}dx \to \int\frac{\frac{1}{2}du}{1+x^4} = \frac{1}{2}\tan^{-1}u + C = \frac{1}{2}\tan^{-1}(x^2)+C$$

$$\boxed{\int\frac{x}{1\,x^4}dx = \frac{1}{2}\tan^{-1}(x^2)+C}$$

#71	Pág 419	#47

$$\int x(2x+5)^8\,dx$$

$u = 2x+5\ ;\ du = 2\,dx$

$x = \frac{1}{2}(u-5)$

$$\int x(2x+5)^8\,dx = \int \frac{1}{2}(u-5)u^8\left(\frac{1}{2}du\right) = \frac{1}{4}\int (u^9 - 5u^8)\,du$$

$$= \frac{1}{4}\left(\frac{1}{10}u^{10} - \frac{5}{9}u^9\right) + C = \frac{1}{40}(2x+5)^{10} - \frac{5}{36}(2x+5)^9 + C$$

$$\boxed{\int x(2x+5)^8\,dx = \frac{1}{40}(2x+5)^{10} - \frac{5}{36}(2x+5)^9 + C}$$

#72	Pág 419	#63

$$\int_0^{13} \frac{dx}{\sqrt[3]{(1+2x)^2}}$$

$u = 1+2x\ ;\ du = 2\,dx$

$x = 0\ ;\ u = 1\ ;\ x = 13\ ;\ u = 17$

$$\int_0^{13} \frac{dx}{\sqrt[3]{(1+2x)^2}} = \int_1^{27} u^{-2/3}\left(\frac{1}{2}du\right) = \left[\frac{1}{2}\cdot 3u^{1/3}\right]_1^{27} = \frac{3}{2}(3-1) = 3$$

$$\boxed{\int_0^{13} \frac{dx}{\sqrt[3]{(1+2x)^2}} = 3}$$

#73	Pág 419	#66

$$\int_{-\pi/3}^{\pi/3} x^4 \operatorname{sen} x\,dx$$

$$\int_{-\pi/3}^{\pi/3} x^4 \operatorname{sen} x\,dx = 0$$

$\rightarrow$ $\boxed{f(x) = x^4 \operatorname{sen} x \text{ es una función impar}}$

#74	Pág 419	#71

$$\int_0^1 \frac{e^z + 1}{e^z + z}\,dz$$

$u = e^z + z\ ;\ du = (e^z+1)\,dz$

$z = 0\ ;\ u = 1\ ;\ z = 1$

$u = e+1$

$$\int_0^1 \frac{e^z+1}{e^z+z}\,dz = \int_0^{e+1} \frac{1}{u}\,du$$

$$\left[\ln|u|\right]_1^{e+1} = \ln|e+1| - \ln|1| = \ln(e+1)$$

$$\boxed{\int_0^1 \frac{e^z+1}{e^z+z}\,dz = \ln(e+1) \simeq 1.31326}$$

#75	Pág 419	#77

$$\int_{-2}^{2}(x+3)\sqrt{4-x^2}\,dx$$ Semicírculo radio = 2 $I_1 = 0 \rightarrow$ Teorema 7(b)

$$\int_{-2}^{2}(x+3)\sqrt{4-x^2}\,dx = I_1 + I_2 = \int_{-2}^{2}x\sqrt{4-x^2}\,dx + \int_{-2}^{2}3\sqrt{4-x^2}\,dx$$

$x_2 = -2$; $x = 2 \rightarrow I_2$

$f(x) = x\sqrt{4-x^2}$ $\rightarrow I = 0 + 3\frac{1}{2}(\pi \cdot 2^2) = 6\pi$

$$\boxed{\int_{-2}^{2}(x+3)\sqrt{4-x^2}\,dx \rightarrow I = 0 + 3\frac{1}{2}(\pi\cdot 2^2) = 6\pi}$$

#76	Pág 420	#87

$\int_{0}^{4} f(x)\,dx = 10$; encontrar $\int_{0}^{2} f(2x)\,dx$

$u = 2x$
$du = 2dx$ $\int_{0}^{2} f(2x)\,dx = \int_{0}^{4} f(u)\left(\frac{1}{2}du\right) = \frac{1}{2}\int_{0}^{4} f(u)\,du = \frac{1}{2}(10) = 5$

$$\boxed{\int_{0}^{4} f(x)\,dx = 10 \rightarrow \int_{0}^{2} f(2x)\,dx \Rightarrow 5}$$