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	$30a)\int_1^2 \frac{1}{x^3}dx =$ $\qquad$ $30)\int_0^5 x^{3/2}dx =$ $34)\int_0^{\pi}(1+\cos x)dx =$ $x + \sin x\Big]_0^{\pi}$ $(\pi + \sin\pi) - (0+\sin(0))$ π $40)\int_0^4 \frac{1-\sqrt{x}}{\sqrt{x}}dx =$ $\int_0^4 \frac{1-x^{1/2}}{x^{1/2}}$ $\int_0^4 (1-x^{1/2})x^{-1/2}$ $\int_0^4 x^{-1/2} - 1 = 2x^{1/2} - x\Big]_0^4$ $(2\sqrt{4}-4) - (2\sqrt{0}-0)$ 0

$(1+x)(1+x)(1+x)$

$(1+2x+x^2)(1+x)$

$1+2x+x^2$

$+x+2x^2+x^3$

$1+3x+3x^2+x^3$

$39a)\int_0^1 (1+x)^3\,dx =$

$\int_0^1 1+3x+3x^2+x^3$

$x+\frac{3}{2}x^2+x^3+\frac{1}{4}x^4\Big]_0^1$

$\left(1+\frac{3}{2}+1+\frac{1}{4}\right)-(0)$

3.75

$39a)\int_0^1 (1+x)^3\,dx =$

$\frac{1}{4}(1+x)^4\Big]_0^1$

$\frac{1}{4}(2)^4-\frac{1}{4}(1)^4$

$4-\frac{1}{4}$

3.75

$39b)\int_0^1 (1+2x)^3\,dx =$

$\frac{1}{2}\cdot\frac{1}{4}(1+2x)^4$

$\frac{1}{8}(1+2x)^4\Big]_0^1$

$A)\int_2^5 5^x\,dx = \frac{5^x}{\ln 5}$

$\frac{d}{dx}(5^x) = 5^x\cdot\ln 5\cdot 1$

$\int 5 + 3\cos x$

	Using the calculator to compute area
	A) $\int_0^8 \frac{1}{5+3\cos(x)} = \int_0^8 \frac{1}{5+3\cos(x)} = 1.833$
$\sqrt{9-4x^2} = 0$ $9-4x^2 = 0$ $\frac{9}{4} = \frac{4x^2}{4}$ $\frac{9}{4} = x^2$	B) Find the Area of the region between the x-axis and the graph of $y = \sqrt{9-4x^2}$. $\int_{-\frac{3}{2}}^{\frac{3}{2}} \sqrt{9-4x^2} = 7.068$
	C) For what value of x does $\int_0^x t^2\,dt = 2$
	D) For what value of x does $\int_0^x e^{-t^3}\,dt = .5695$
$\sqrt[5]{1-x^5} = 0$ $1-x^5 = 0$ $1 = x^5$ $1 = x$	E) Find the area of the region in the first quadrant enclosed by the coordinate axes and the graph of $x^5 + y^5 = 1$. $\int_0^1 \sqrt[5]{1-x^5} = .950$ $-x^5 \quad -x^5$ $y^5 = 1-x^5$ $y = \sqrt[5]{1-x^5}$
	F) Find the average value of $\sqrt{\sin x}$ on the interval [1, 2]. Avg Value $= \frac{\text{Area}}{\Delta x} = \frac{\int_1^2 \sqrt{\sin x}}{2-1} =$