Fill in the Blanks — Mean Value of a Function

$f(x)$	a	b	$b-a$	Mean Value of $f(x)$ in the interval $[a,b]$		Mean Value of $f(x)-3$	Mean Value of $-2f(x)$
x^3	1	4	3	$\frac{1}{3}\int_1^4 x^3\,dx = \frac{1}{3}\left[\frac{x^4}{4}\right]_1^4$	$\frac{85}{4}$	$\frac{73}{4}$	$-\frac{85}{2}$
e^{2x}	0	2	2	$\frac{1}{2}\int_0^2 e^{2x}\,dx = \frac{1}{2}\left[\frac{e^{2x}}{2}\right]_0^2$	$\frac{e^4-1}{4}$	$\frac{e^4-13}{4}$	$\frac{1-e^4}{2}$
$\sqrt{1+2x}$	0	4	4	$\frac{1}{4}\int_0^4 (1+2x)^{1/2}\,dx = \frac{1}{4}\left[\frac{2}{3}(1+2x)^{3/2}\right]_0^4$	$\frac{13}{3}$	$\frac{1}{3}$	$-\frac{26}{3}$
$\sin(3x)$	0	π	π	$\frac{1}{\pi}\int_0^\pi \sin(3x)\,dx = \frac{1}{\pi}\left[-\frac{\cos(3x)}{3}\right]_0^\pi$	$\frac{2}{3\pi}$	$\frac{2-9\pi}{3\pi}$	$-\frac{4}{3\pi}$
$(1-x)^2$	1	3.5	2.5	$\frac{2}{5}\int_1^{3.5} (1-x)^2\,dx = \frac{2}{5}\left[-\frac{(1-x)^3}{3}\right]_1^{3.5}$	$\frac{25}{12}$	$-\frac{11}{12}$	$-\frac{50}{12}$
$\frac{1}{\sqrt{x+2}}$	-1	7	8	$\frac{1}{8}\int_{-1}^7 (x+2)^{-1/2}\,dx = \frac{1}{8}\left[2(x+2)^{1/2}\right]_{-1}^7$	$\frac{1}{2}$	$-\frac{5}{2}$	-1
$\cos\left(\frac{x}{4}\right)$	$-\pi$	2π	3π	$\frac{1}{3\pi}\int_{-\pi}^{2\pi} \cos\left(\frac{x}{4}\right)dx = \frac{1}{3\pi}\left[4\sin\left(\frac{x}{4}\right)\right]_{-\pi}^{2\pi}$	$\frac{4+2\sqrt{2}}{3\pi}$	$\frac{4+2\sqrt{2}-9\pi}{3\pi}$	$\frac{-8-4\sqrt{2}}{3\pi}$