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> restart;
> f := x->x+sin(x);
f:= x → x + sin(x)

> f(3);
3 + sin(3)

> V := int(Pi*f(x)^2, x = 0 .. 4);
V:= 2 π sin(4) - 1/2 π cos(4) sin(4) + 70/3 π - 8 π cos(4)

> simplify(V);
- 1/6 (-12 sin(4) + 3 cos(4) sin(4) - 140 + 48 cos(4)) π

> V2 := Pi*((1/3)*4^3-(2*4)*cos(4)+2*sin(4)+2-(1/4)*sin(8));
V2:= π ( 70/3 - 8 cos(4) + 2 sin(4) - 1/4 sin(8) )

> A := V-V2;
A:= 2 π sin(4) - 1/2 π cos(4) sin(4) + 70/3 π - 8 π cos(4)
- π ( 70/3 - 8 cos(4) + 2 sin(4) - 1/4 sin(8) )

> simplify(A);
0

> g := x->x/(1-x);
g:= x → x / 1 - x

> V3 := int(Pi*g(x)^2, x = 0 .. 1/2);
V3:= 3/2 π - 2 π ln(2)

>

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