Exercises

Basics

① Show that the area of a Pythagoras triangle as shown in theory ($a < b < c$ and $a^2 = b + c$) with $a = g$ equals 1800

Differentiation

② Show that the derivative of

$$\int_{\sin(x)}^{\cos(x)} \sqrt{1-t^2}\, dt \text{ equals } -1.$$

Integration

③ Show that the integral

$$\int \sin(2x)\cos(3x)\,dx$$

equals $\frac{3}{5}\sin(2x)\sin(3x) + \frac{2}{5}\cos(2x)\cos(3x) + C$