

## Exercises

1. If  $f(x) = x - 2\cos(x)$ , find the maximum value and the minimum value of the function on the interval where  $-2 \leq x \leq 0$ . [Exercise 68 in Section 4.1.]
2. If  $x^2 + xy + y^3 = 1$ , find the value of the third derivative  $y'''$  at the point where  $x = 1$ . [Exercise 40 in Section 3.5.]
3. Find an equation of the line tangent to the curve given by parametric equations  $x = 3t^2 + 1$  and  $y = 2t^3 + 1$  at the point on the curve where  $x = 4$  and  $y = 3$ . [Exercise 22 in Appendix K.2.]