IB Math HL1: More Equation(s) of the tangent line

Example 1) Find the x-coordinates of the point(s) where the tangent to  at x=1 meets the curve again.

Example 2) Find the equations of tangents to from the external point (2, 3)

Example 3)  is the equation of a tangent line to the graph of  at (2, 7). Find the value of a and b.

Practice)

1) Find the equation of tangents to  from the external point (-2, 0).

2) Find two equations of the tangent to  from the external point (0, 0)