1. Find as many pairs of rational numbers as you can that satisfy:

(a) \( y^2 = x^3 + 1 \)

(b) \( y^2 = x^3 + 17 \)

(c) \( y^2 = x^3 - 2 \)

(d) \( y^2 = x^3 - 4x \)

2. Using our addition and doubling formulas, find more numbers in 1. Try to find all the pairs of integer solutions for each case.