1. Find all (affine) points \((x_1, y_1)\) on the Edwards curve \(x^2 + y^2 = 1 - 5x^2y^2\) over \(\mathbb{F}_{13}\).

2. Verify that \(P = (6, 3)\) and \(Q = (3, 7)\) are on the curve. Compute \(R = [2]P + Q\) in affine coordinates.

3. Compute a birationally equivalent Montgomery curve; state the birational equivalence \(\phi\) from the Edwards curve to the Montgomery curve and the inverse map \(\psi\).

4. Compute \(\phi(P)\) and \(\phi(Q)\) and \(S = [2]\phi(P) + \phi(Q)\) on the Montgomery curve.

5. Verify that \(\psi(S) = R\).