Second round of presentations:

William L: Finiteness of equivalence classes of indefinite BQFs with fixed Disc (first two pages of chapter 3).
Taylor: Proposition 4.1 (+ something cool that you like!)

David and Rianna (in some order): Assuming solutions to a suitable Pell’s equations, prove that if an indefinite BQF \( f(x,y) \) has one solution to the equation \( f(x,y) = m \), then it has infinitely many solutions (let’s talk about sources / proofs in person)

Vickie and William K (in some order): Prove that the Pell’s equation \( x^2 - ny^2 = 1 \) always has infinitely many solutions (Prop 5.8 of http://www2.math.ou.edu/~kmartin/nti/chap5.pdf or any source that you find and like!).

Composition of binary quadratic forms and the group structure:

TC: Motivation for composition of bilinear forms (elaborate on what’s there in Page 55)
Courtney: Define composition of “nice” bilinear forms (Elaborate on the last half of page 57 and motivate further lectures)

Manuel: Prove that every form is equivalent to a united form (let’s talk about sources / proofs in person)
Jacob: Proposition 4.5

Danielle and Deven (in some order): Well definedness of composition (Theorem 4.7)

Mark and Michael (in some order): Verify that the composition we defined on equivalence classes of BQFs (with fixed discriminant) obeys the axioms of a group -- check the existence of identity, check commutativity, associativity and inverses.

Andrew and Nicholas (in some order): Define ambiguous forms, and exhibit various different inequivalent ambiguous BQFs in the negative definite case, and if there’s time, prove that you have supplied an exhaustive list (let’s talk in person about sources / proofs)