

Hints 17-18

- 17.1. Use the upper half-plane model (guess, where to place the common point of two lines on the absolute?).
- 17.2. Use the upper half-plane model.
- 17.3. Show that an orientation-reversing isometry always preserve two points of the absolute (you don't need to compute for that!).
- 17.4. Use the classification of isometries.
- 17.5. (a) Directly compute with the formula of the reflection.
 (b) Use Q .
 (c) Find the example using two lines intersecting at the centre of the model $(0, 0, 1)$.
- 18.1. (a),(b) Use the upper half-plane model.
 (c),(d) Use the orthogonal projections of the points A, B, C to l (you probably don't need any model for these parts).
- 18.2. (a) Consider the reflection with respect to h .
 (b) Consider some symmetry again.
 (c) This is a “not-a-question” question, to collect a couple of things which you already know.
 (d) You may want to use (c) and 17.2 here.

Here are the diagrams showing what can happen in (c) and (d):

