

### 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) This question is not-a-question.  
 (c) One more "not-a-question" question.  
 (d) You may want to use (c) and 17.2 here.

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

