## Practice: Ladder on Wall

1. Create a dynamic worksheet that visualizes the situation of a ladder of length 6 units lean against a wall.
(a) Open GeoGebra (English) or Change the language under Options of the pull-down menu.
(b) Create objects on the drawing pad as follows:


|  | Objects to be created | Action |
| :---: | :---: | :---: |
| 1. | Slider a | - Select " $\stackrel{a=2}{\bullet}$ Slider" from menu button <br> - Click on drawing pad <br> - Set $\min =0 ; \max =6$; vertical ; width $=200$; Increment $=0.01$ |
| 2. | Point A | - Type " $A=(0, a)$ " in the input field |
| 3. | Circle c | - Type "c = Circle[A, 6]" in the input field |
| 4. | Point B | - Select "•A New Point" <br> - Click on the point of intersection of circle $c$ and $x$-Axis |
| 5. | Segment L | - Select " $\circ$ Segment between two points" <br> - Click on Point A and B <br> - Right click on segment and choose "redefine" from the sub-menu <br> - Change the definition to " $L=$ Segment $[A, B]$ " |
| 6. | Mid-point C of AB | - <br> Select " $\bullet^{\bullet}$ Midpoint or center" <br> - Click on segment L <br> - Right click on point C and choose "properties" <br> - Select "Show label:" and choose "Name and Value" <br> - Check "Show Trace" <br> - Change the color of point C |
| 7. | Text for instruction | - Select ${ }^{\prime}$ ABC $\qquad$ nsert text" <br> - Click on drawing pad <br> - Type the instruction |
| 8. | Hide unnecessary objects | - Right on circle c and uncheck "Show object" |

(c) Save the file named as "LadderOnWall.ggb".
2. The students may try to derive the equation of the locus of Point C.

