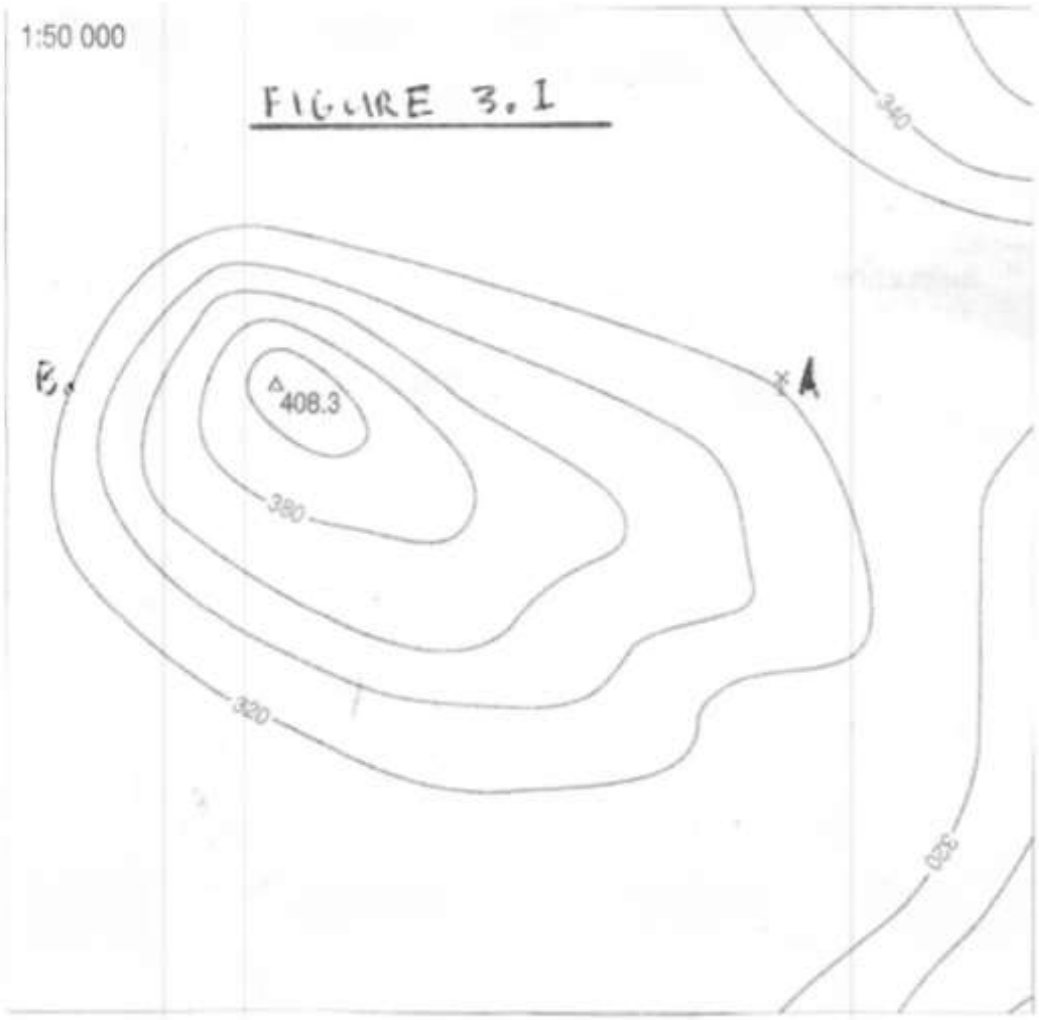
Cross-sections on Topographic Maps

1. **Cross-section**
   - **1.1. In order to get a clear picture of a landform, it might be necessary to draw a cross-section of it.**
   - **1.2. A cross-section is a drawing of a side view of a landform such as a valley, a hill or a section of a landscape.**
   - **1.3. It will also show intervisibility. Intervisibility tells us whether one point is visible from another point or whether there are obstacles in the way that block the line of sight.**
   - **1.4. A cross-section enables you to have an accurate visual impression (image produced in your mind) of the topography (all the natural and constructed features of a geographical area.)**

2. **How to construct a cross-section.**
   - **2.1. Extract information from the map. It will be provided.**
   - **2.2. Take a ruler and draw a pencil line from A to B.**
   - **2.3. Lay a strip of paper between the two points (AB) given for the cross-section.**
   - **2.4. Transfer all the map information onto the strip of paper. Mark all geographic features intersecting the paper strip and labelling them.**
   - **2.5. Construct a graph with the horizontal axis being the information on the strip of paper and the vertical axis the vertical scale provided to you in the question. Starting with the number of a contour line below the lowest contour height on your map and finishing with a contour line higher than the highest contour line on your map. Remember they are in intervals of 20m.**
   - **2.6. Lay the strip of paper on the horizontal axis and transfer the map information onto the graph.**
   - **2.7. Transfer each contour tick to its respective height on the vertical axis.**

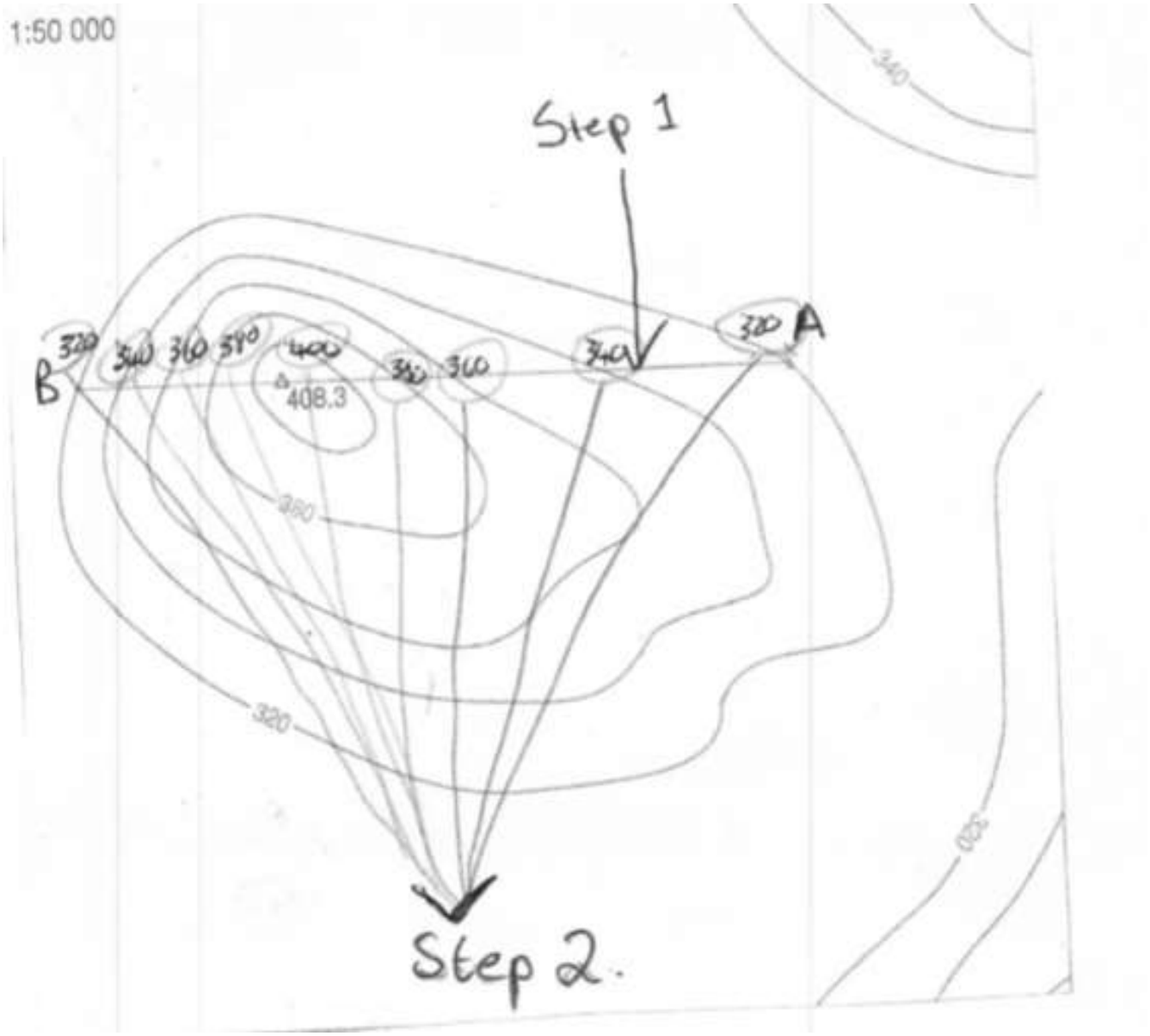
3. **Example**
   - **3.1. Draw a cross-section from windmill A to B as marked on the map in figure 3.1. Use vertical scale of 1cm represents 20m. Show the position of all geographic features on the cross-section and add all appropriate labels and captions.**



Answer:

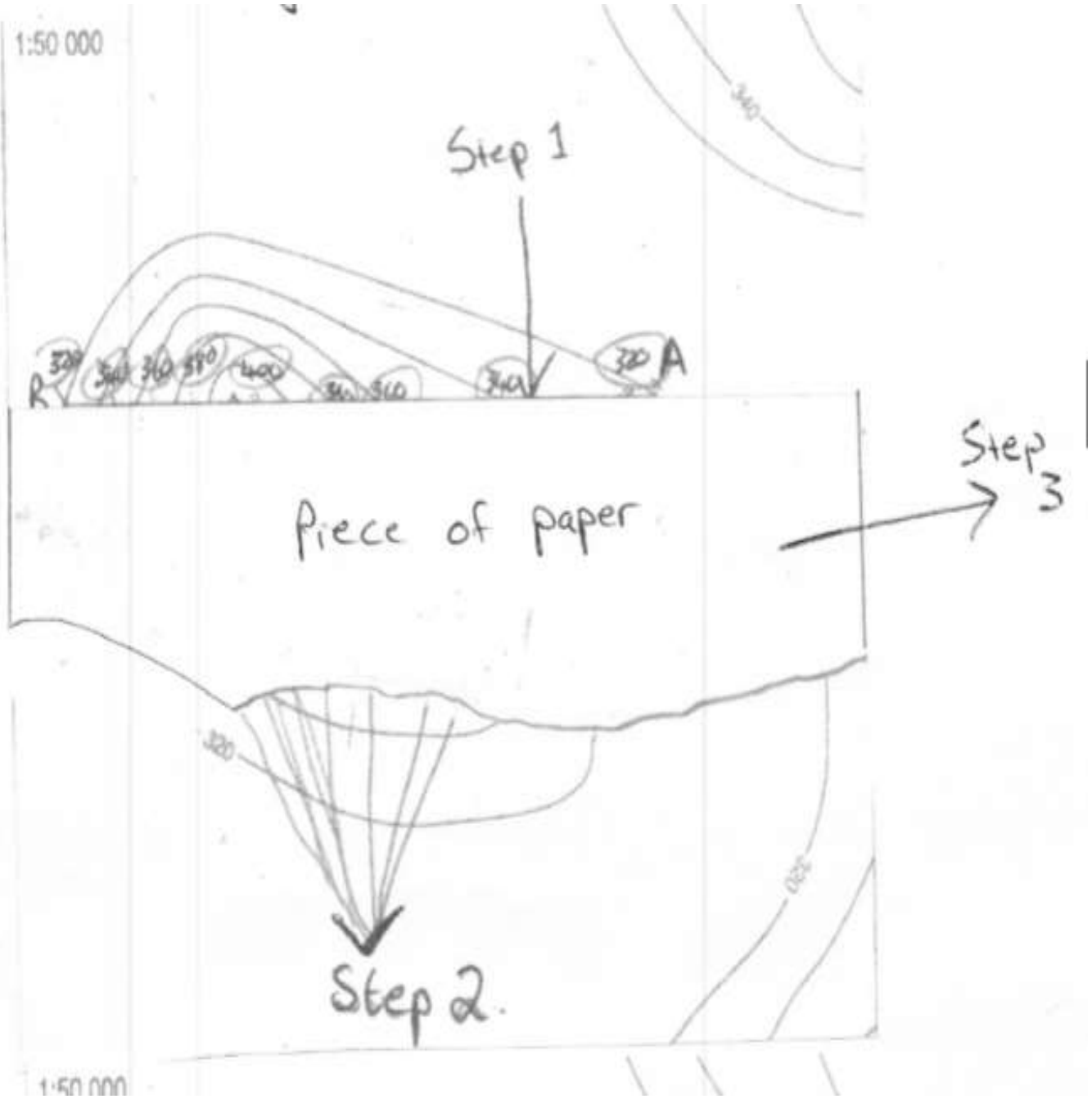
Step 1: Draw a pencil line from A to B

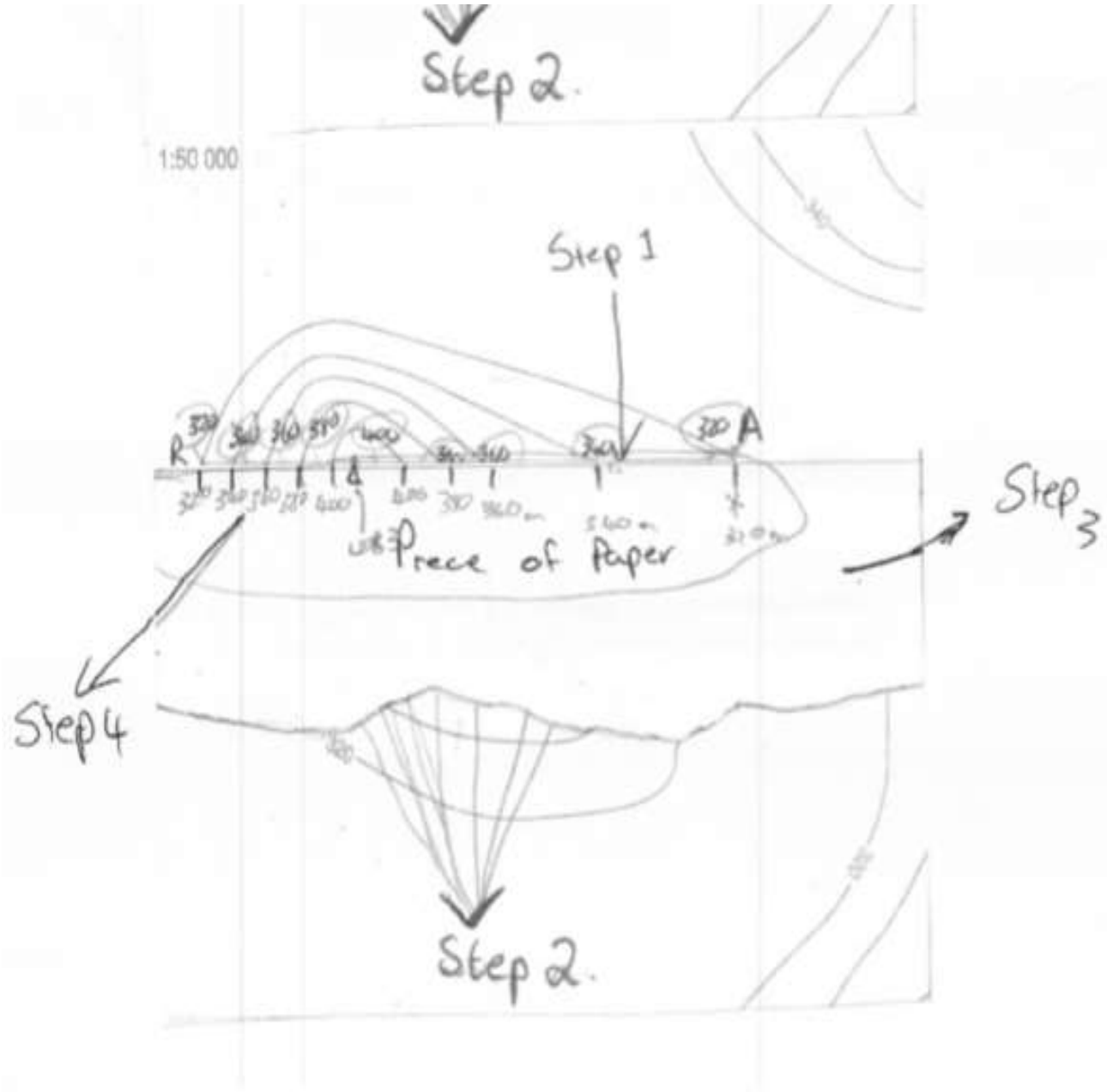
Step 2: Number the contour lines without numbers (Remember every line increases by 20m)



Step 3: Take a strip of paper and place it with the straight edge on the pencil line from A to B

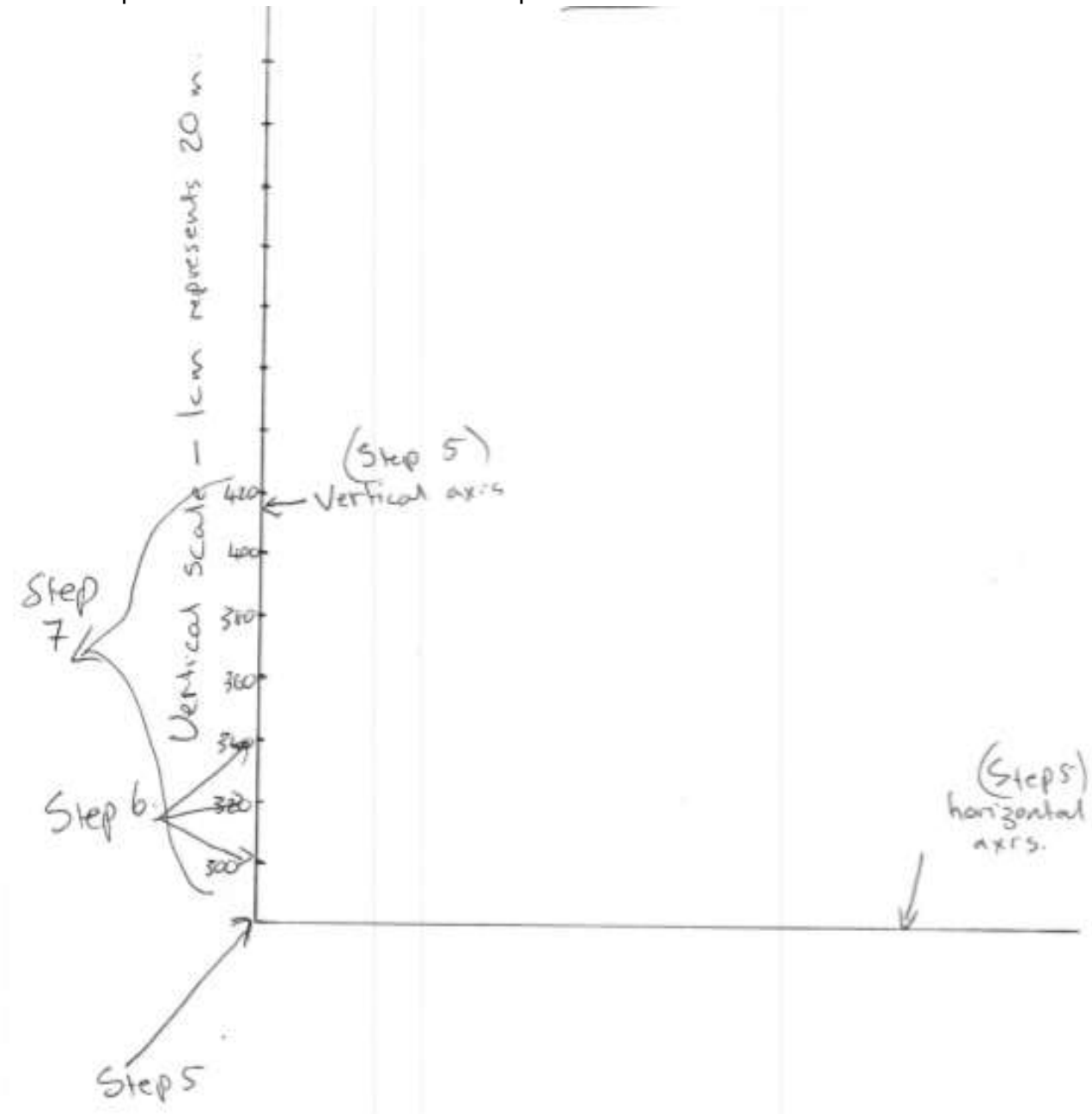
Step 4: Transfer all the geographic features onto the strip of paper and label them, contour lines and height, windmill & trig beacon and its height.


1:50 000
Step 1
R
A
Piece of paper
Step 3
Step 2.
1:50 000



Step 5: Draw the graph with vertical axis and horizontal axis.

Step 6: Draw in vertical scale: km represents 20m:km is 20m



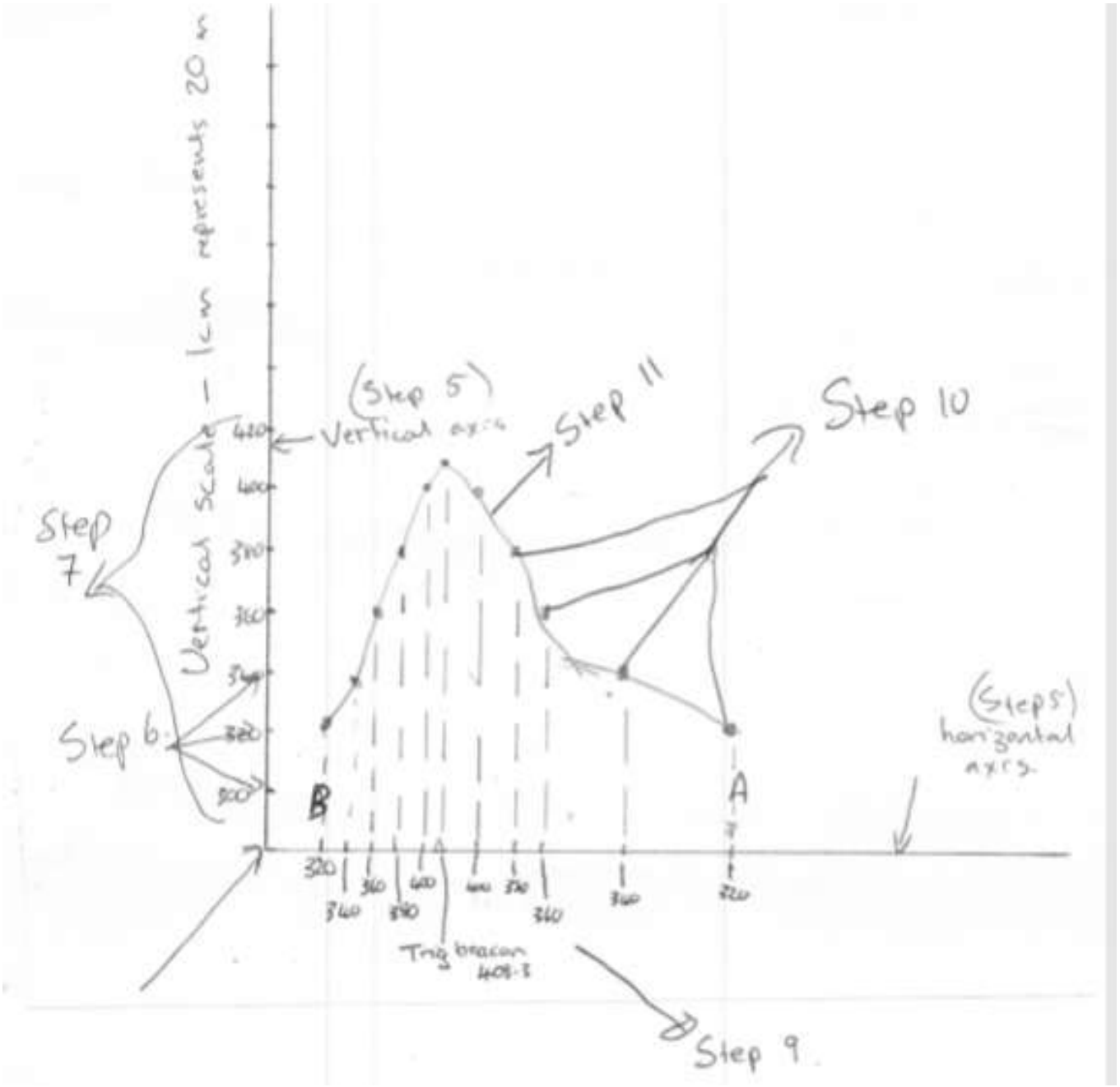
Step 7: Put the vertical scale in starting with 1 contour lower than map contour's lowest height. Map's lowest 320m.

Start with 300m – The highest on the map is 400m, The highest on the scale must be 420m.

Step 8: Place the paper strip on the horizontal axis and transfer the info from the paper strip onto the graph.

Step 9: Label the info onto the graph.

Step 10: Draw the dots on the graph corresponding with vertical axis.



Step 11: Join the dots.