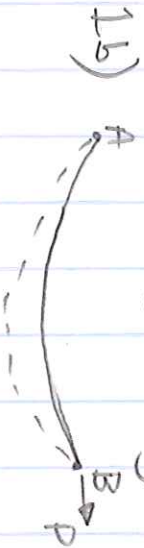




Catenary under self weight only

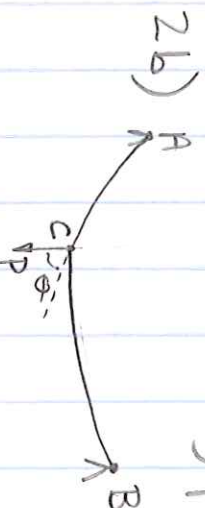


Same cable, only a uniform horizontal load has been applied.

Cable still forms a catenary, agreed? Remember, the load  $P$  is uniform along the span!



Same curve as 1a only with an arbitrary point  $C$  defined



Consider  $P$  is the equivalent of the force applied in example 1.

We consider curve segment  $AC$  and observe that it is under the uniform load of its own weight as well as the applied load  $P$ . Rotated, that curve looks like:



This isn't a catenary?

There will be a component of  $P$  axially on support  $A$ , but the horizontal component is uniform along the curve.