

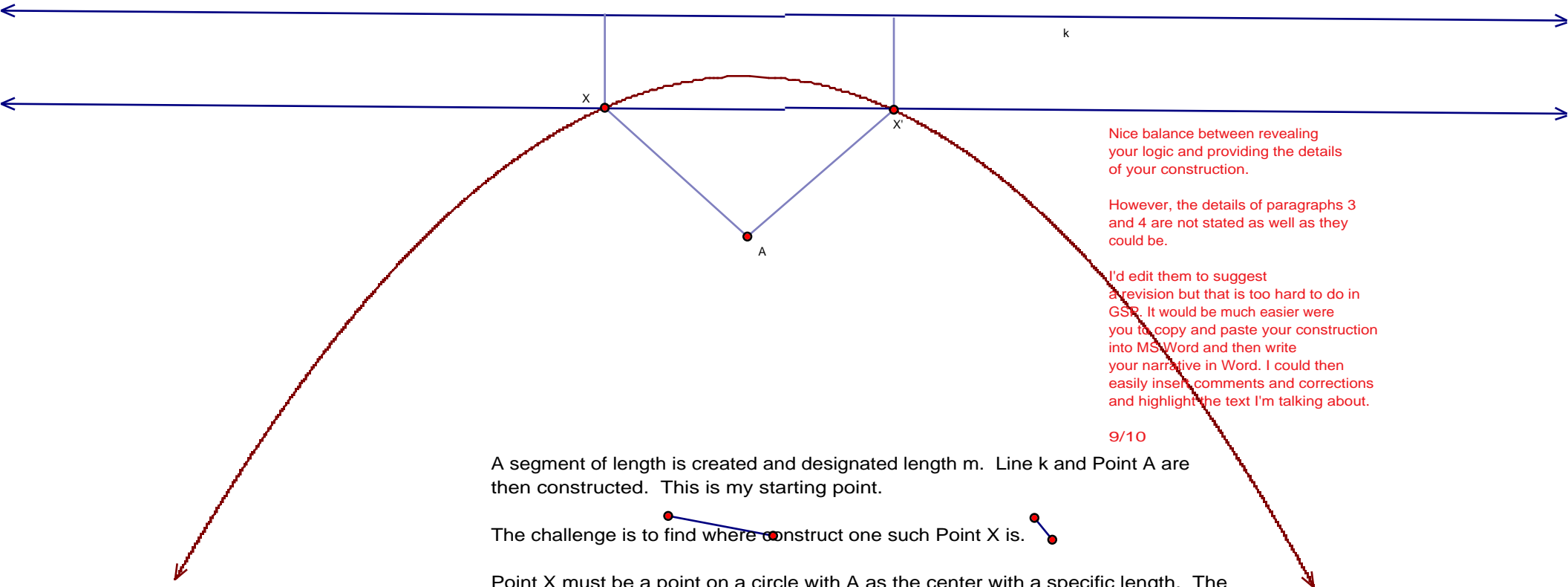
Hide initial conditions and goal of construction

Given: Point A, line k, and length m.

Construct the locus of points X such that $m = \text{Dist}(X,A) - \text{Dist}(X,k)$



length m = 2.36 cm
Dist(X,A) = 4.54 cm
Dist(X,k) = 2.17 cm
Dist(X,A)-Dist(X,k) = 2.36 cm
Dist(X',A) = 4.54 cm
Dist(X',k) = 2.17 cm
Dist(X',A)-Dist(X',k) = 2.36 cm



Nice balance between revealing your logic and providing the details of your construction.

However, the details of paragraphs 3 and 4 are not stated as well as they could be.

I'd edit them to suggest a revision but that is too hard to do in GSP. It would be much easier were you to copy and paste your construction into MS Word and then write your narrative in Word. I could then easily insert comments and corrections and highlight the text I'm talking about.

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A segment of length is created and designated length m. Line k and Point A are then constructed. This is my starting point.

The challenge is to find where to construct one such Point X is.

Point X must be a point on a circle with A as the center with a specific length. The radius will give me Dist(X,A). This is defined above as Dist(M, "drag me")

Point X must also be a point on a line parallel to k at a given distance from k. The length of the perpendicular segment from X to line k will give me Dist(X,k). In order to meet the requirements of my construction the length of this should be the difference between length m and Dist(X,A). If the distance from M and "drag me" were Dist(X,A) and the Dist(M,N) were length m, then Dist(X,k) would be the distance from N to "drag me."

Where the circle and the parallel lines intersect will define point X. The locus will be the set of all Points X that are still the intersection as I vary Dist(M, "drag me") while keeping m constant.