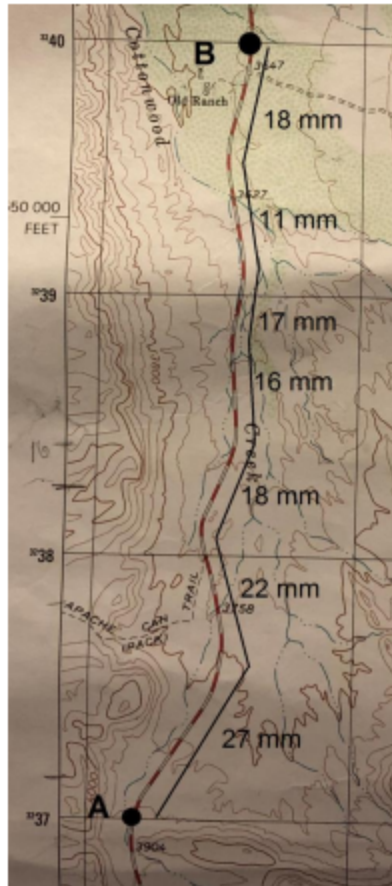## MEASURING THE LENGTH OF CURVED LINES

In some labs you will be required to measure a curved line such as a road or a creek. In addition to measurement wheels, here are two methods that will provide satisfactory results for the purposes of the lab work:

1. Turn the curved line into straight line segments. An example is shown below:
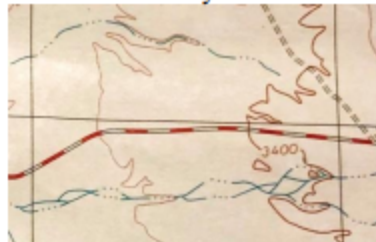

27+22+18+16+17+11+18 = 129 mm or 12.9 cm. Convert to inches: 12.9/2.54 = 5.08 inches.

RF = 1: 24,000

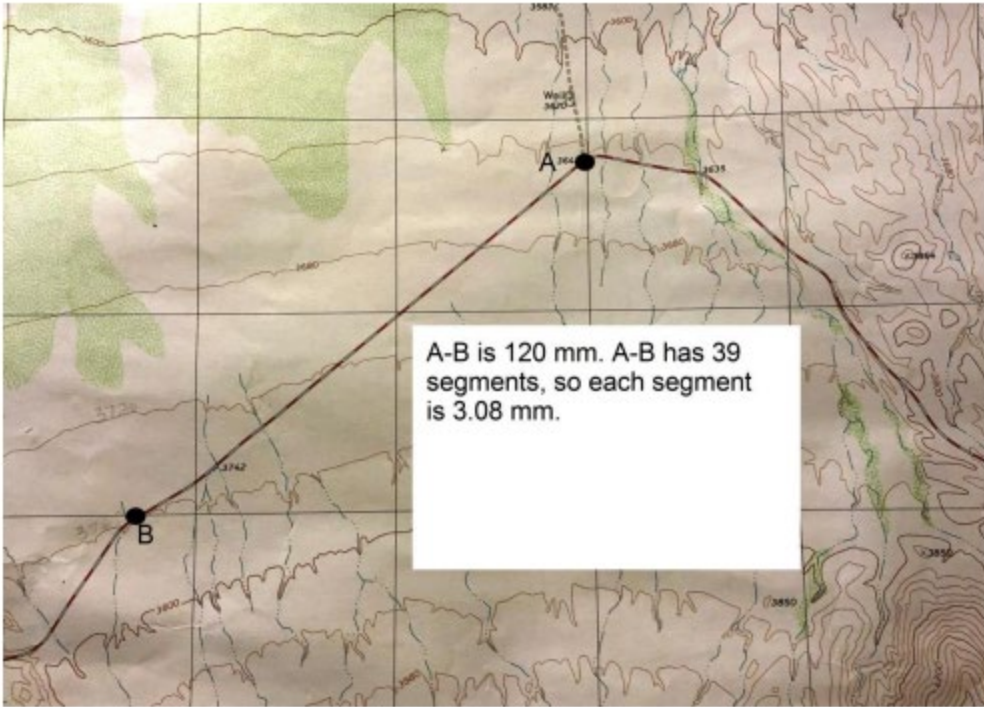Road distance in miles: 5.08 x 24,000 = 121,920 inches = 121,920/63360 = 1.924 miles.

Road distance in km: 12.9 x 24,000 = 309,600 cm =309,600/100,000 = 3.096 km.

2. Use the road symbol to find the length of a road. A common road symbol is alternating red and white segments. Most of these segments have a regular, consistent length, so they can be used to estimate the length of a road.

How?

Find the length of one segment:

A-B is 120 mm. A-B has 39 segments, so each segment is 3.08 mm.

You can now estimate the length of a curved road:

There are 28 segments between A and B. Road length is 28 x 3.08 mm = 86 mm.