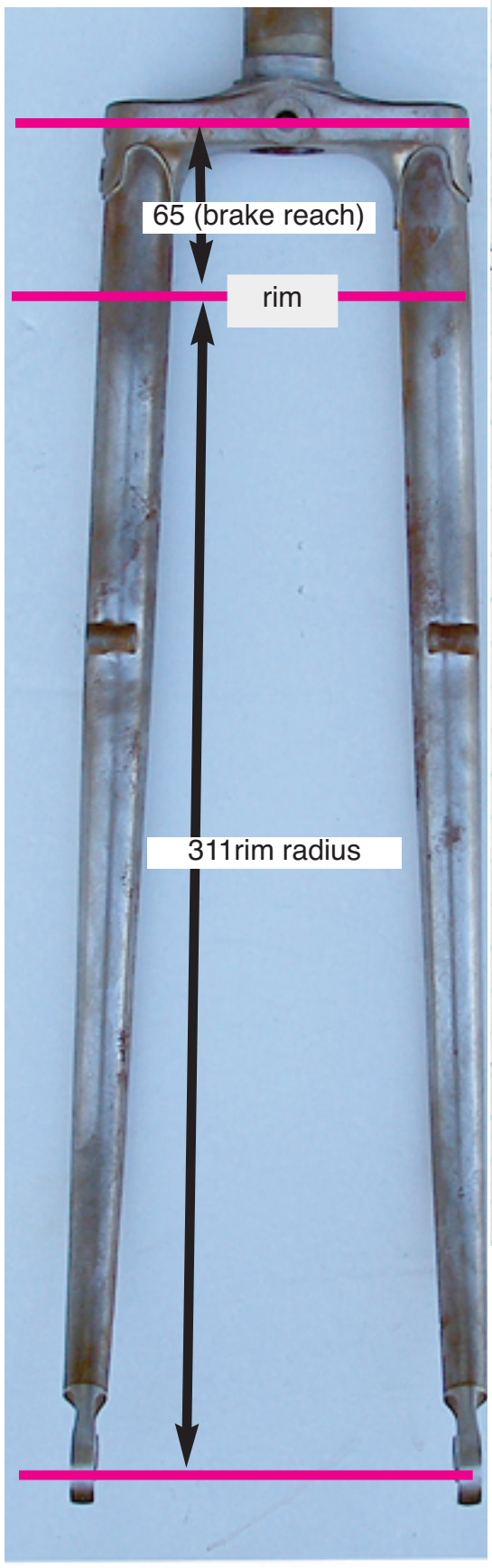
Mark the fork length.
Here's how you figure it out:

1.Know your rim radius. Man, for a 700c wheel it's 311mm. For 650B, 292. For 26-in, 279.5. This one here is a 700c bike, so the radius is 3_ _.

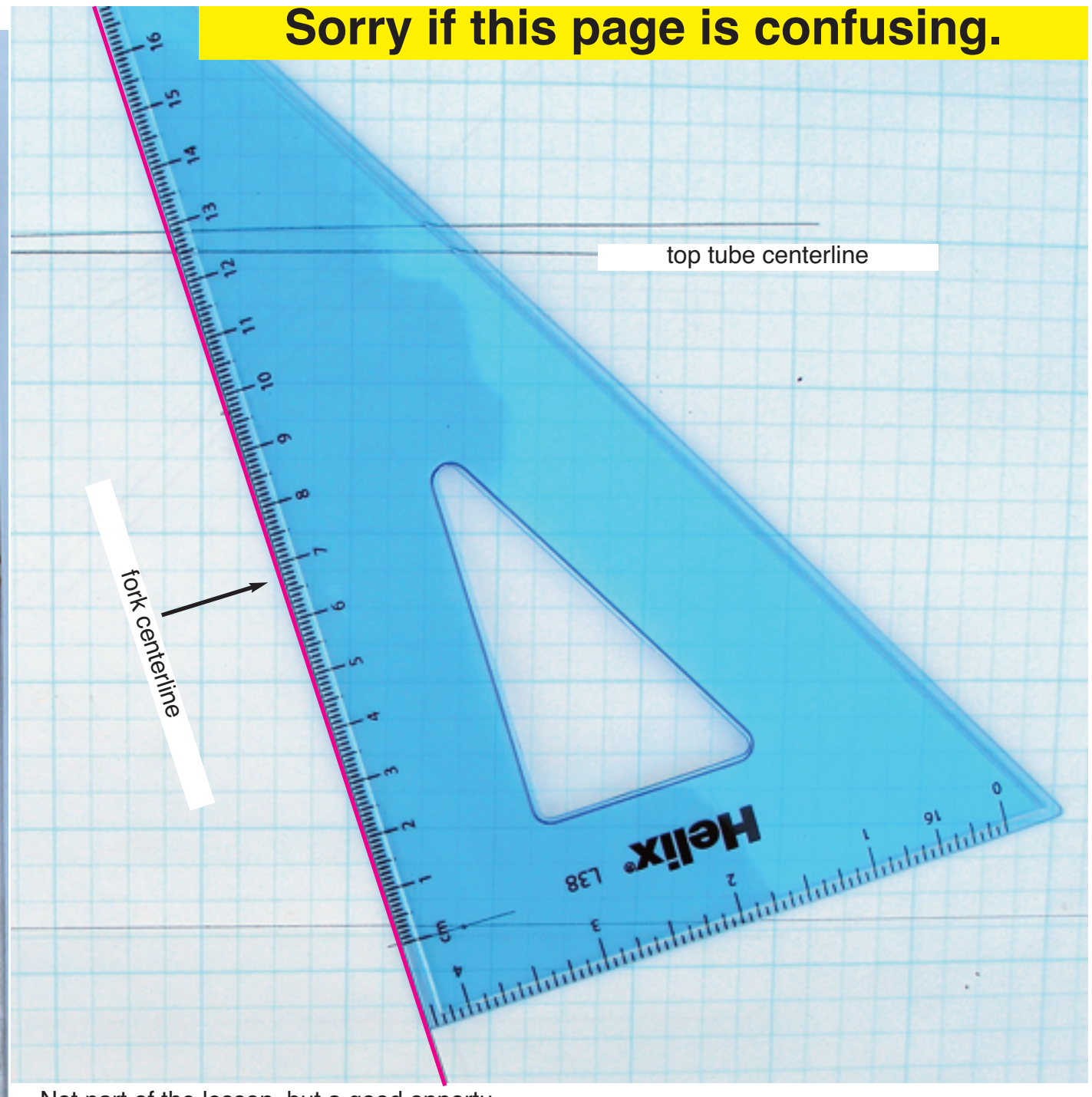
2. What brake reach do you want? Brake reach is the distance from the rim's braking surface to the hole in the fork crown (where the brake mounts). If the brake reach is too long for the brake, your brake pads won't reach the rim. If it's too short, your pads will be braking on the air below the rim.
The tires and fenders you want to ride determine that. For a racy bike with a Campy or SRAMANO group, pick 49mm. It will limit you to skinny tires and no fenders, and that's why we don't like that stuff. But the maximum reach on those brakes is 49mm (or 50mm for Campy). If you want Hilsen-Hilborne like clearance and the ability to fit a 40mm tire and a fender, you'll want 64 to 65mm of reach, and you'll use either cantilevers, Paul or Dia-Compe centerpuls, or the Silver brakes.

2. For mountainy clearance (Atlantis etc), go with about 70 to 72mm.

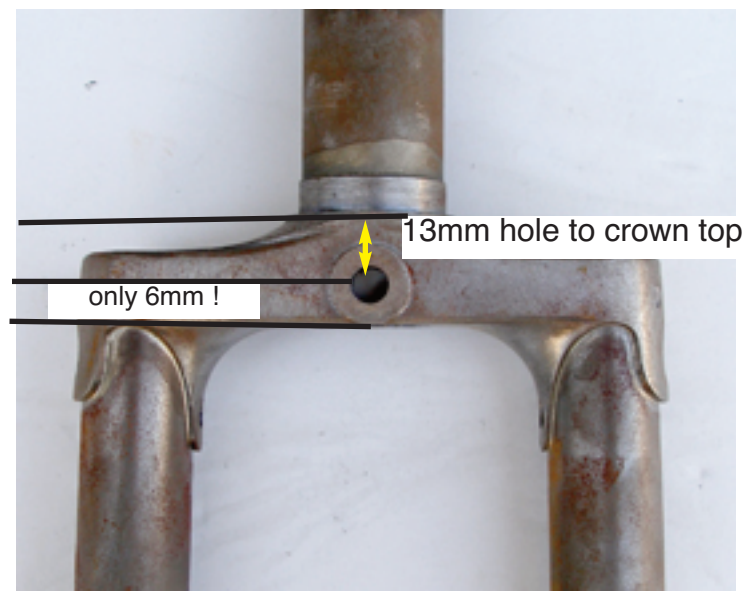


This bike here is Hilsen-like, so it'll have 65mm of brake reach. And it's a 700c bike, so the rim radius is 311. Add the two and you get 376. That's the distance from the axle center to the brake hole (on this bike, maybe not on yours). But it's not the total fork length. You have to add the potion of the crown above the center of the brake hole, as show in this fantastic photo.

Sorry if this page is confusing.

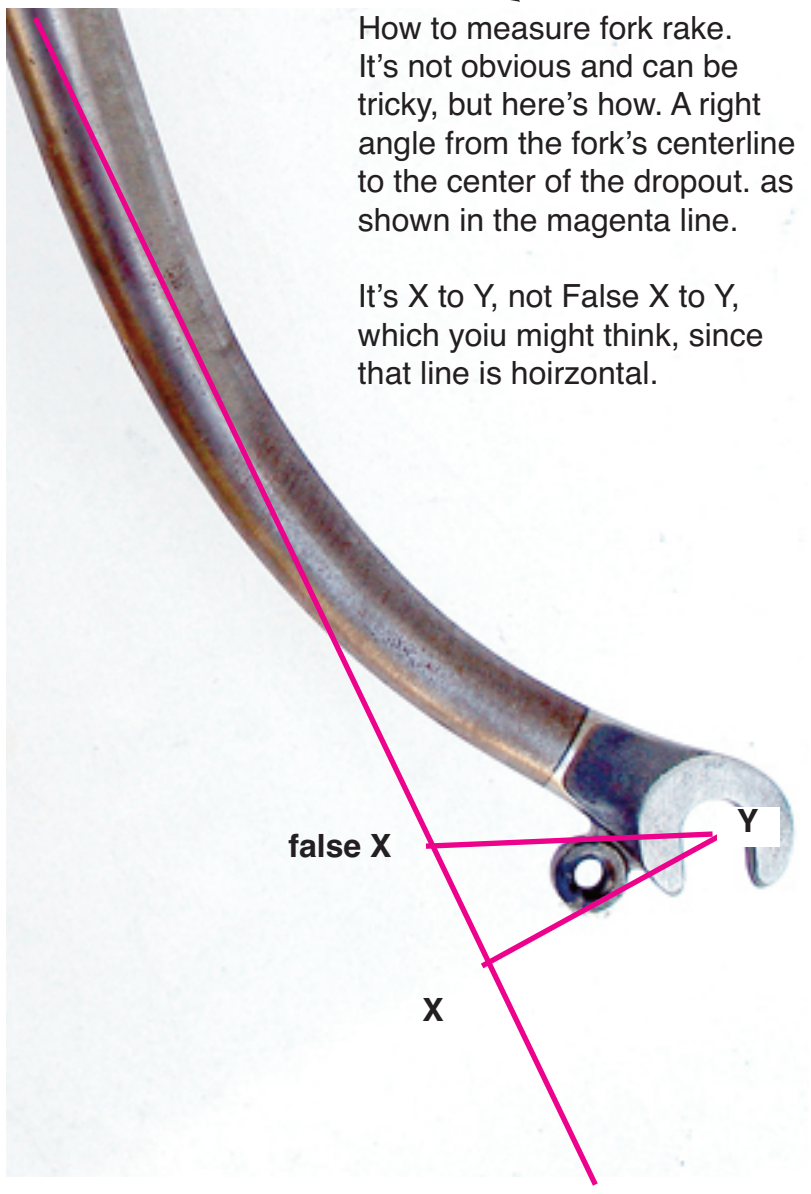


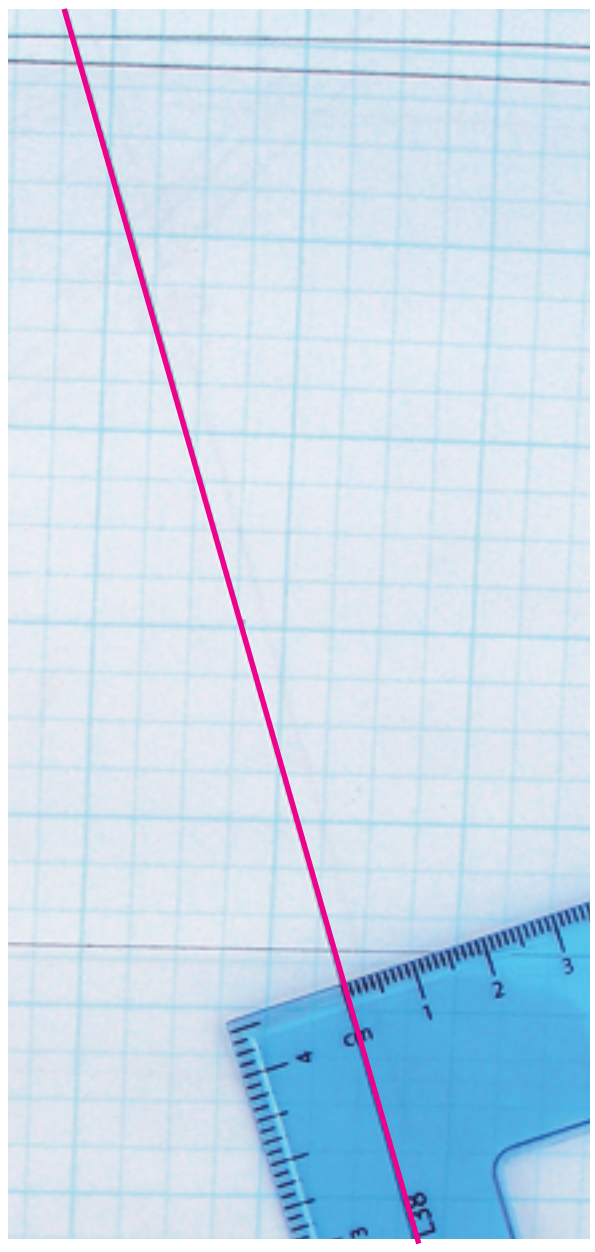
Not part of the lesson, but a good opportunity to point out a neat feature of our crowns. See that the hole-center is only 6mm from the bottom of the crown? The typical distance is 9.5 to 13mm. What's the big deal? It's not a big deal, it's a gigantic deal. Have you ever had a tire barely NOT clear a fender, or the underside of a brake? Ever buy a 32mm tire looking forward to a cushier ride, only to find out it rubs on the brake or the crown? It happens all the time (in general, but not on our bikes).
Our fork crowns have holes as low as they can go, so for a given amount of brake reach, our bike will have more clearance than any other bike. There is no fork crown out there with a lower hole. Carbon forks (oh boy, you say, here he goes again...) have high holes--typically 10mm or more. And they have 43mm of brake reach (typically), and too much of that reach is filled up with carbon, not air.
On a fork made with any of our crowns, you get maximum air space for tire, fender.



How to measure fork rake. It's not obvious and can be tricky, but here's how. A right angle from the fork's centerline to the center of the dropout. as shown in the magenta line.

It's X to Y, not False X to Y, which yoiu might think, since that line is hoirzontal.





On this fork I picked a rake of 52mm, which, divided by four, is 13mm. So you get your Helix brand triangle with the metric graduations marked on it, and make the right-angle line betweeh the fork's centerline and the center of the dropout whatever fork rake you want, divided by four.

Draw the line in.