Brock’s backyard is perfect for a zip line. He ordered a 200-ft line and in order to install it, he needs to figure out where to anchor the cable on each of his two trees. So here’s what he did. First, Brock read through the entire manual the evening before he planned on setting up his zip line.

The next day he paced off the distance to make sure he knows the exact distance. The distance is 180-ft. He fills in Box 1 = 180.

Next, he figured out the amount of slope he will need. Since he purchased a zip line that only included a stop block, his calculations will be for a 3% slope. Whipping out his smart phone he multiplies 180 x 0.03 and gets 5.4, which he rounds to the nearest whole number and enters 5 in Box 2.

Using his length of 180 from Box 1 he multiplies it by 0.02. His answer was 3.6 which he rounds to the nearest whole number 4 and enters it into Box 3.

To figure out how much his yard elevation change is between the two anchor points he ordered a sight level. He is six feet tall, so he pencils 6 in Box 4B. Next he looks through the site level until the bubble lines up with the center crosshairs on the end anchor tree. There happens to be a nice branch that he can identify easily which will be what he will use for a mark. He hikes to the end anchor tree, sets a ladder against the tree and climbs up the ladder with a tape measure. He measures from the ground to his mark, which was a nice branch. The tape measures 14-ft. He pencils in 14 in Box 4A and then calculates what Box 4C is. [14 - 6 = 8] and he pencils 8 in Box 4C.

Just for the fun of double checking his figures, he downloads an altimeter app on his smart phone. Standing at the base of the start anchor tree he takes the first measurement which is 1743 ft from sea level. He jots down that number while striding over to the end anchor tree. Taking another measurement on his app at the base of the end anchor tree, the reading shows 1735 ft from sea level which he pencils below the first figure. Calculating the difference between these two measurements will be the elevation change between his two anchor points and this can be entered into Box 4C.

1743 ft - 1735 ft = 8 ft.

With all of his physical measurements completed, he sits down on his backyard deck and fills out the rest of his worksheet.

To calculate his ending anchor height [Box 3 + 7 FEET = Box 5]
4 + 7 FEET = 11 FOR THE END ANCHOR HEIGHT.

To calculate his starting anchor height [Box 2 + Box 5] - [Box 4C] = [Box 6]
[5 + 11 = 16] - [8] = 8 FOR THE START ANCHOR HEIGHT.

Now Brock is ready to move on to his next step.

2. go to next steps
CABLE INSTALLATION