## Possible Solutions

Victor is building a square patio in his backyard. The area of the patio is 150 square feet. Using a number line to show your answer, what is the length of each side rounded to the nearest tenth?

It is important to understand the patio is in the shape of a square. To find the area of a square you can use the formula, s^2 = area. So, the problem is really asking for the student to find the square root of 150. The best approximation of 150 is 12.2 feet.

Possible Solution 1

Because the patio is a square, a student could estimate the solution. A student might know that 12 x 12 is 144 and 13 x 13 is 169, so the answer is between 12 and 13. Also, because 150 is closer to 144 than 169, the answer should be closer to 12 then 13.
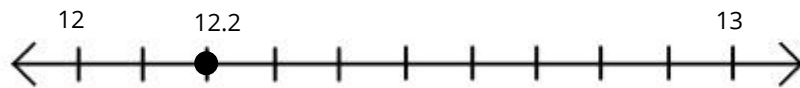
It is important to understand the patio is in the shape of a square. First draw a square and label what is known.
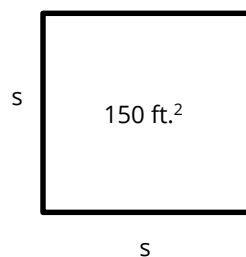
The formula for area is A = s^2. If we substitute into the formula, 150 = s^2.

So the problem is really asking for the students to find the square root of 150. Using a calculator and rounding to the tenths place, the best approximation of 150 is 12.2 feet.

Possible Solution 2

Locate your answer on the number line below. Remember to label at least three points on your number line.

12   12.2   13