Making Stairs 1-2-3

Stairs with 5 risers at 7" each

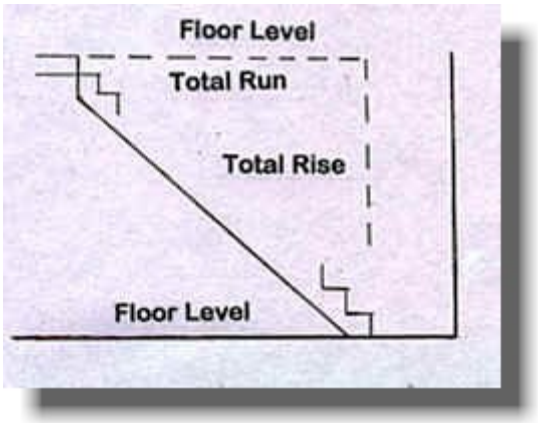
Stairs with 3 risers at 8 1/4" each

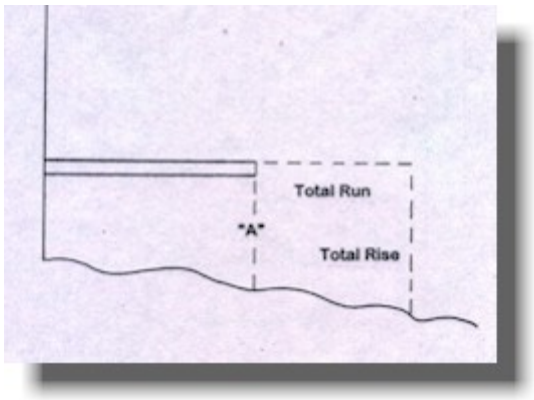
Laying out and cutting the stair support (stringer) is the backbone of making stairs correctly. Even though precut stair stringers are available at the home centers, they are a compromise most of the time because they have a fixed riser height of 8". To correctly make stairs, follow these guidelines:

- All step riser heights should be the same
- No step should ever exceed 8 ¼ inches high.
- Once your calculations show a rise over 8 ¼ inches, add one more riser into your stringer calculation.
- The wider a step can be (up to 11 ½") the more comfortable it is to walk on.
- Use 3 stringers whenever possible for standard step widths.

The reason why pre-cut stringers from the home center are not as good as making them on site is because the total **rise** you are calculating for does not often equal an exact multiple of 8". With pre-cuts you will usually end up with one step shorter than the rest to compensate.

Step 1. Determine total rise your steps will cover. Note measurement "A" below would not be your total rise due to sloping ground conditions.

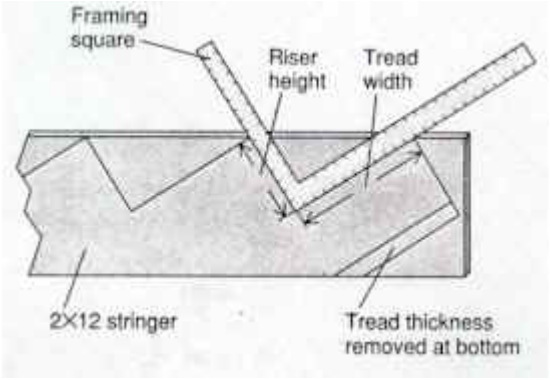


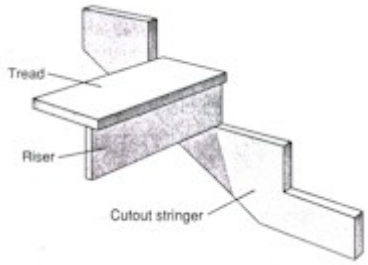


Step 2. Determine total run your steps will cover. If this measurement is not important such as on most deck applications, do not involve this measurement in the calculation. When total run is not important, use a step depth measurement of 11 ¼".

Step 3. Divide your total rise by 8 as a starting point to see how many risers you'll need. Adjust the number of risers following the guidelines above. You want as few steps as possible while not exceeding 8 ¼ inch rise with each step.

Step 4. If total run is needed in your application, divide the total run by the number of risers. This will give you your tread depth. Add 1" to this measurement for front overhang on each step and rip your stair tread lumber to this measurement. Step depth should not be less than 9 inches. Remember deeper steps are better...up to 11 ½ inches. This is why you want the fewest number of risers you can get away with while not exceeding 8 ¼ inches in riser





Step 5. Mark and cut stringer out of 2x12 lumber. Cut the thickness of your tread (either 1" or 1 ½") out of the bottom of the lowest step as shown. (Note: This thickness is compensated for by the addition of this same thickness to the top step when it's tread is installed.)

Step 6. Test fit for accuracy. Use this stringer as a pattern for the others.