

Are the stairs in your home up to code?

Remember --

The ideal ratio of riser to tread is 0.7

$\text{INV TAN } 0.7 = 35^\circ$ < ---ideal angle of inclination

$r + t = 17$ inches

$r.t = 70$ to 75

there can be no more than $3/16$ of an inch variation in height of risers in a set of stairs.

I. Do stairs in your home fit these guidelines?

To find out, use a ruler to measure one riser and one tread from TWO sets of stairs in INCHES and complete the following table:

Description of Stairs	Riser height (in)	Tread length (in)	SLOPE = riser/tread	Angle of Inclination	Sum, r+t	Product, r.t
-----------------------	-------------------	-------------------	---------------------	----------------------	----------	--------------

Generally, staircases do not have to be changed if the angle of inclination is LESS than the ideal, but they do if the angle is MORE than the ideal.

Should your stairs be changed? _____

II. RESULTS

Write a full paragraph explaining your results in the chart above. Tell what you measured, including a description of the two sets of stairs you investigated

What you calculated

Whether or not your stairs fit the guidelines of the current laws

Whether, according to the angles, the stairs should be changed

III. EVALUATION

	Not yet		OK		master architect	
	1	2	3	4	5	6
Calculations are accurate						
Paragraph is						
• Complete	1			2		3
• Mathematically correct	1			2		3
• Checked for correct spelling, grammar and etc.	1			2		3
TOTAL						_____ /15