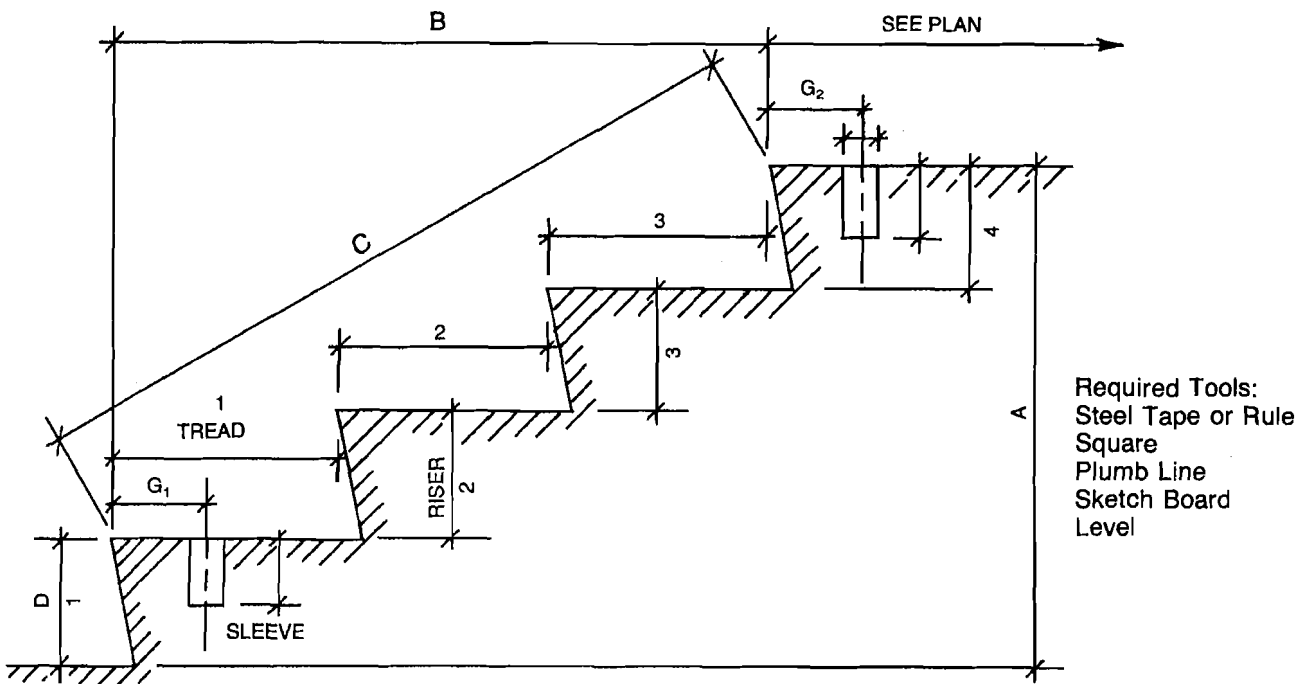


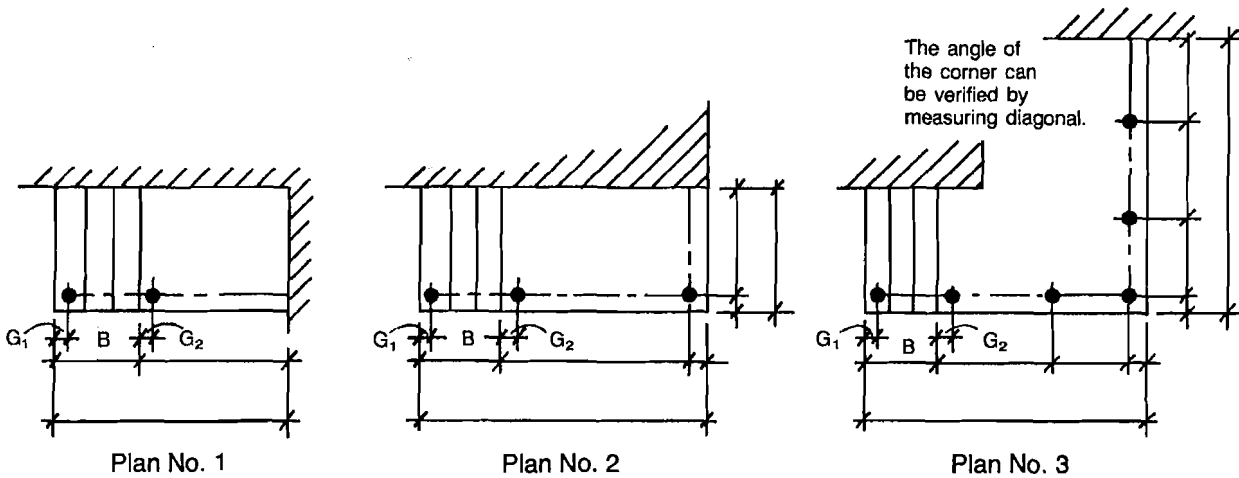
MEASURING STAIRS

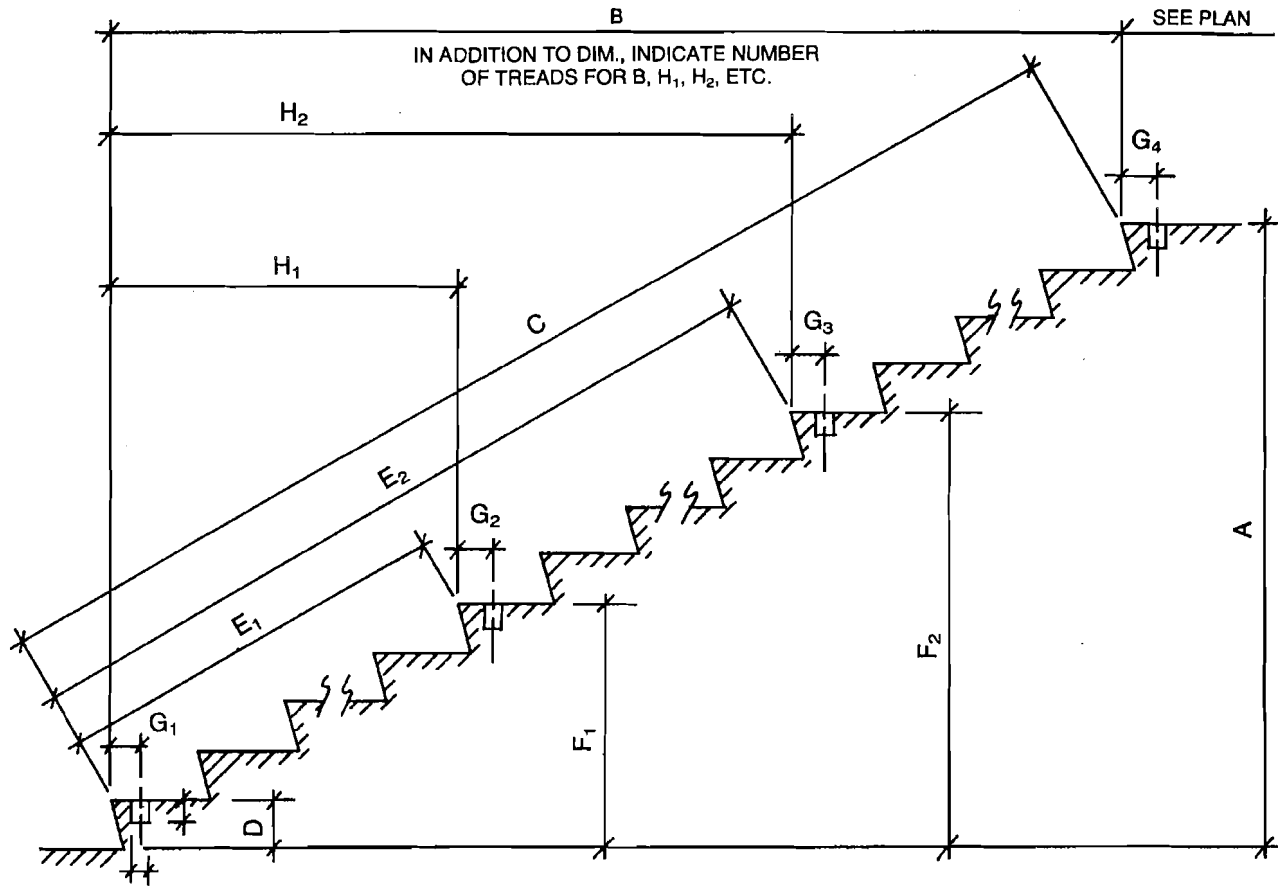
When measuring existing stairs, provide all the information needed. To make a full-size shop layout, draw a profile of the stair and note all dimension lines shown for each part of the stair, using the arrangement plan best suited to actual job conditions (see example, plan Nos. 1, 2 and 3). Measure every dimension that is indicated or preferably use one of the various trade-practice systems shown on pages 46 and 47. Do not assume that dimensions for similar conditions will be the same. Prepare an accurate sketch for each layout. Check pitch of platforms to maintain required railing height.



Required Tools:
 Steel Tape or Rule
 Square
 Plumb Line
 Sketch Board
 Level

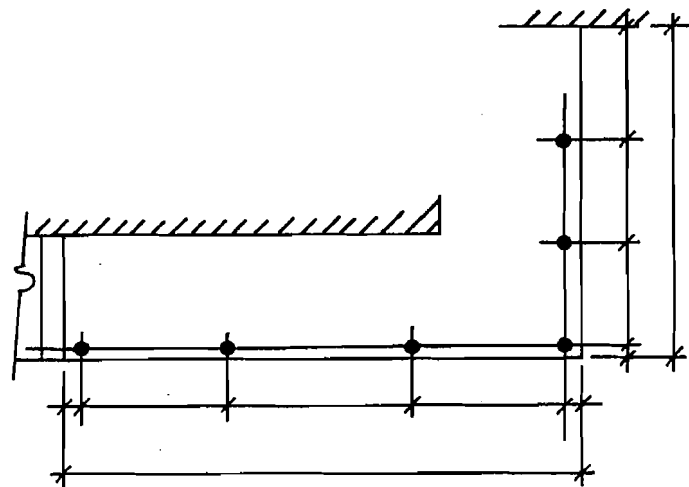
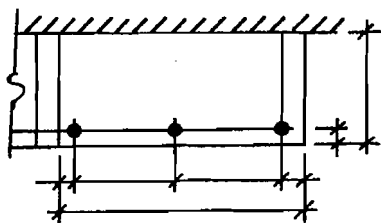
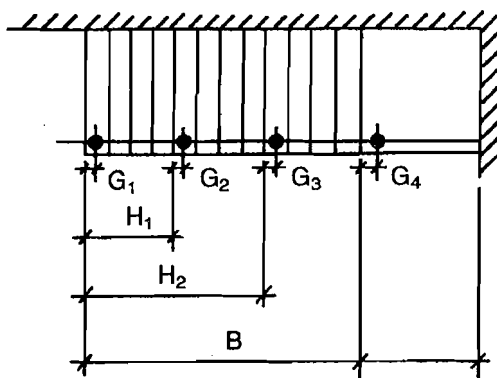
SHORT RUN STAIR PROFILE





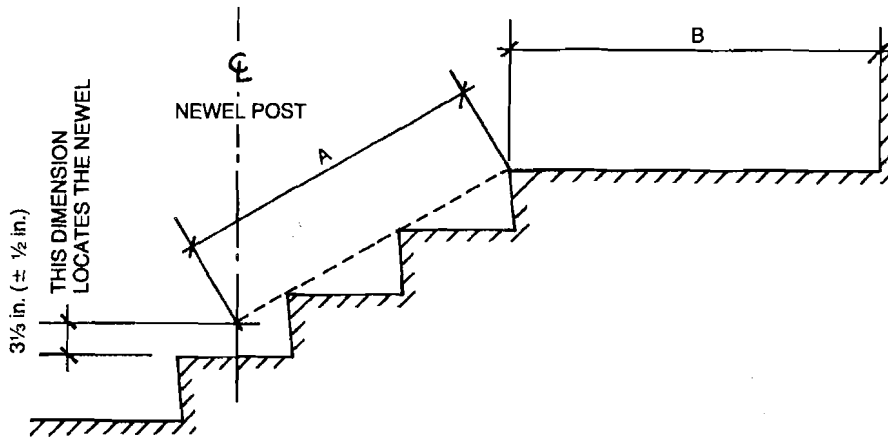
LONG RUN STAIR PROFILE

NOTE: PHOTO COPIES OF SHORT OR LONG RUN STAIR PROFILES AND PLANS SHOWN HERE MAY BE USED TO FACILITATE TAKING FIELD MEASUREMENTS WHEN THESE SKETCHES ARE ADEQUATE.

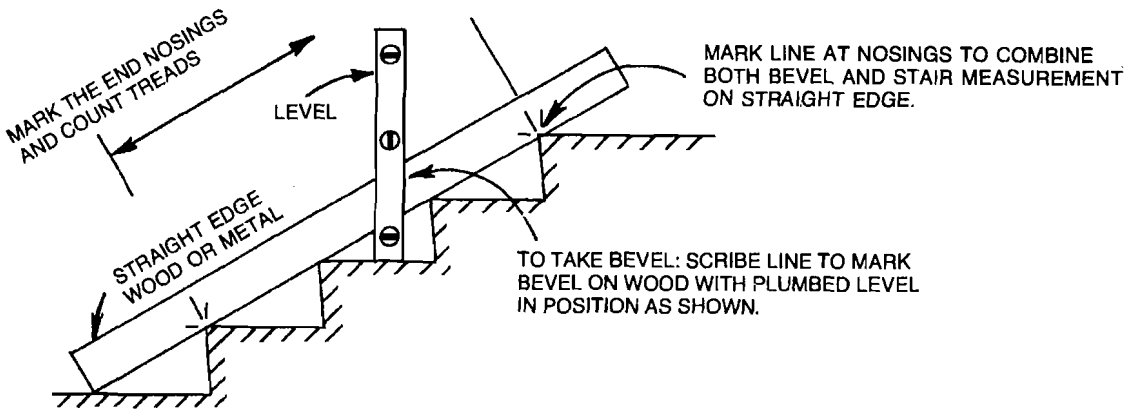


SEE NOTES SHOWN FOR SHORT RUN STAIR MEASUREMENTS.

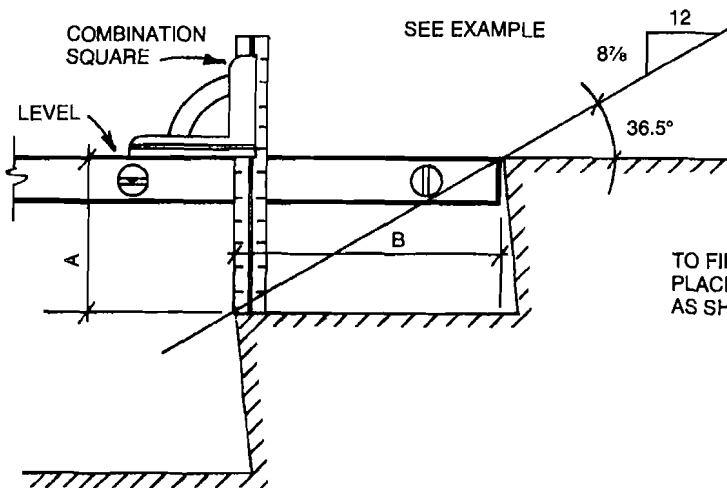
MEASURING STAIRS, USING TRADE PRACTICE METHODS



IF NEWELS ARE CUT TO UNIFORM STOCK LENGTHS, THE 3 1/2 in. DIMENSION IS MAINTAINED BY ADJUSTING THE LOCATION OF THE FIRST NEWEL POST ON THE TREAD SO AS TO ACCOMMODATE THE PITCH OF THE STAIR AND MAINTAIN UNIFORM RAIL HEIGHT.



NOTE: STRAIGHT EDGE METHOD MAY BE USED TO COMBINE BOTH STAIR MEASUREMENT AND BEVEL BY MARKING NOSINGS AND CARRYING STRAIGHT EDGE BACK FOR SHOP LAYOUT USE.



METHOD OF USING COMBINATION SQUARE WITH LEVEL

TO FIND ACCURATE BEVEL FROM ONE TREAD AND RISER: PLACE LEVEL AND COMBINATION SQUARE AS SHOWN AND TAKE DIMENSIONS A AND B.

TO CONVERT A - B DIMENSIONS INTO READING OF SLOPE IN INCHES PER FOOT:
EXAMPLE: A = 7 1/2 in., B = 10 1/8 in.

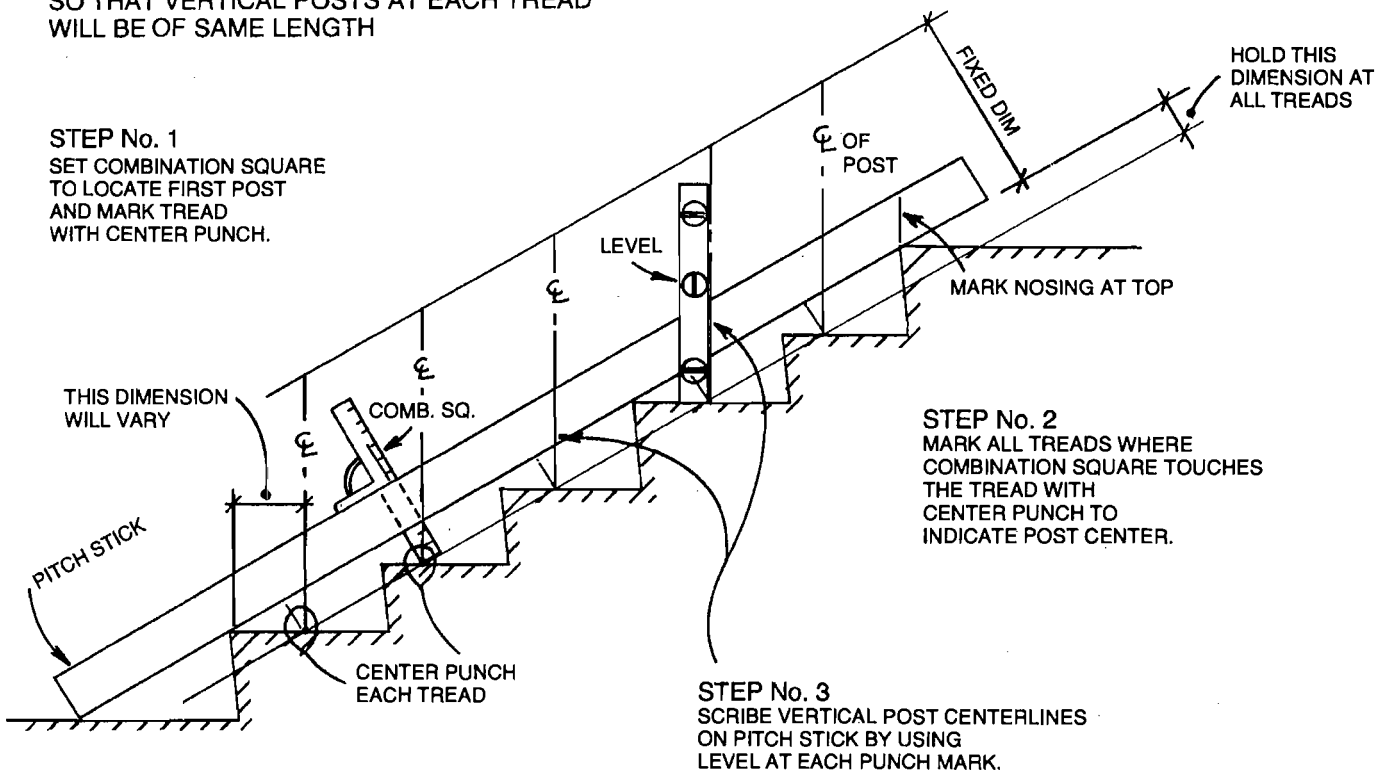
$$S = 7.5 \times 12 \div 10.125$$

$$S = 8.89 \text{ in.} = 8\frac{7}{8} (+) \text{ to } 12 \text{ Pitch}$$

MAY BE CONVERTED TO DEGREES FROM SMOLEY'S BEVEL TABLE

TO CONVERT A - B DIMENSIONS TO ANGLE IN DEGREES BY CALCULATOR:
EXAMPLE: A = 7 1/2 in., B = 10 1/8 in. (TAN = A ÷ B)
TANGENT = 7.5 ÷ 10.125 = 0.741
0.741 INVERTED TO ANGLE = 36.5°
FROM A NATURAL FUNCTION OF NUMBERS TABLE

**METHOD TO MEASURE AND MARK IRREGULAR STAIRS
SO THAT VERTICAL POSTS AT EACH TREAD
WILL BE OF SAME LENGTH**



**USE OF PITCH STICK TO TAKE
FIELD MEASUREMENTS FOR
IRREGULAR STAIRS**

