

Welding: Opening Doors

Door search game

In Construction and Industry math, certain products are measured using with a system of writing both feet and inches.

For example, a standard house walk-in closet door would be expressed as a 2'-8" x 7'-0". Which would mean two feet and eight inches in width and seven feet and zero inches in height. The non-standard description would be 32" x 84" because two feet is 24" plus 8" more will be 32" wide and seven feet is 84". Example;



Industrial doors come in all different widths (including double doors, half doors (upper and lower parts of the door can swing independently), roll up doors, equipment access doors. And the door openings will also vary in size.

Your task today is to divide into groups of three people; using a measuring team of two people with a third person to scribe - search the H-5 classroom, H-6 lab, and the hallway of the H building for the smallest door opening and the largest door opening you can find and write down the dimensions to the nearest $\frac{1}{4}$ " using the 2'-8" x 7'-0" expression in the above example. Then

calculate the total perimeter of both doors. Smallest total perimeter number with the correct math will be named the winner. Hint: the largest door opening will be one of the roll ups and the smallest will be the fun part of the search!

Each winning group member will receive a prize TIME LIMIT: 10 minutes including math.

Game rules: No running, talk only to your group members or the Instructor, must use the largest roll up door dimensions and be a door opening with a door for the smallest, show your work, be safe - no opening electrical boxes in this game.

So, let's say the largest door opening is:

$14' - 3\frac{1}{2}"$ wide x $12' - 6\frac{3}{4}"$ tall and the smallest is $0' - 9\frac{1}{2}"$ wide x $1' - \frac{1}{2}"$ tall.

Application:

Write the names of each group member:

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Start the door search

WIDTH	HEIGHT	LOCATION	PERIMETER

1. Large door opening perimeter calculation:

2. Small door opening perimeter calculation:

3. Combining perimeter of both door openings calculation:

4. TOTAL PERIMETER IN FEET AND INCHES: _____