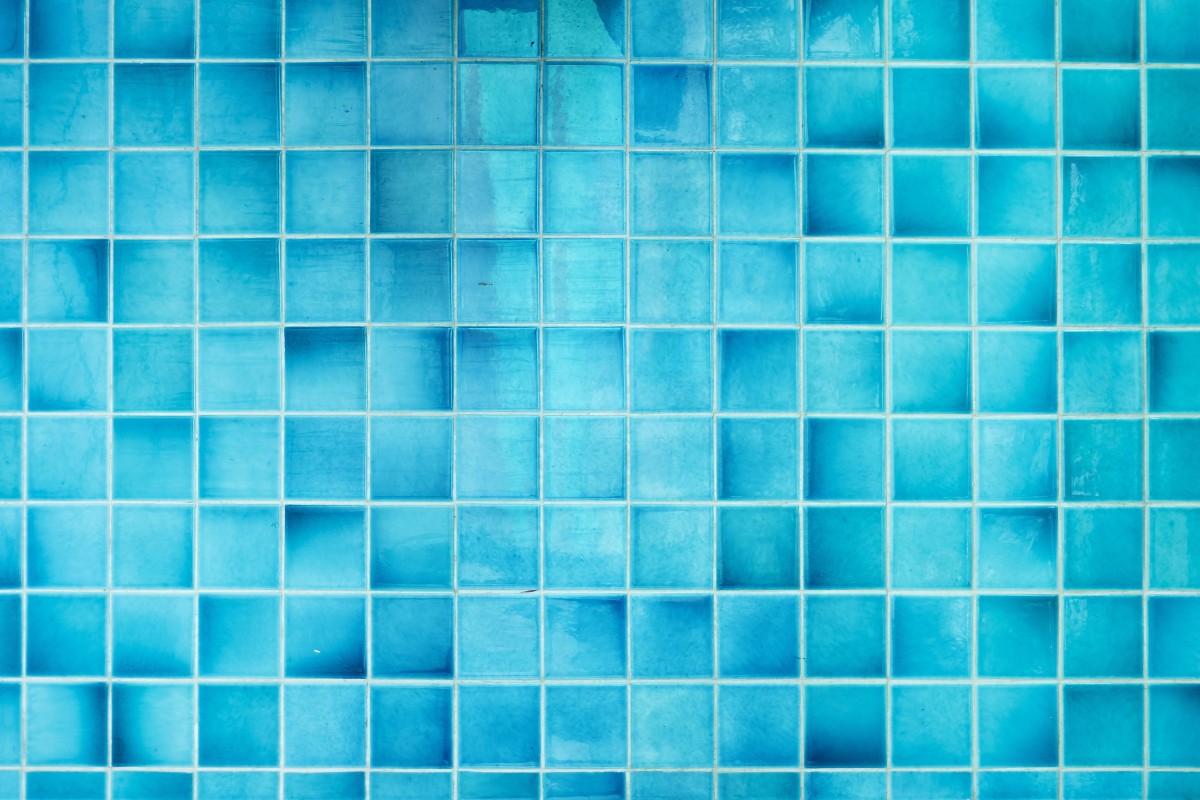
# Perfect Fit



Suppose you want to tile a floor measuring 12 x 15 feet and you want to use only whole tiles which are all the same size. Tiles are available in squares which are 4, 5, 6, 8, 9, 12 inches a side. Which size tiles can you use? What if the floor measured 6 x 10? [[1]](#footnote-1)

1. The floor and tiles are given in different units of measure. Convert the floor measurements from feet to inches.
2. Check each tile length to see which, laid end to end, would cover the floor in both directions with integer multiples (no partial tiles so no cutting).
3. Can you think of other time when the use of factors comes in handy?

# Equal Squares

Cut a piece of paper with a base of 18 cm, and a height of 27 cm into identical squares with the largest possible dimensions. How many squares can be made without having any remaining paper?

# Product Consistency

A bakery wants to introduce fruit pies to their product list. They want to make some samples out of 48 blueberries, 24 raspberries, and 36 slices of kiwi, and they want to use all the fruit. How many sample pies can be made so that the same amount of each type of fruit is in each pie?

# Emergency Relief

A local community center is packing backpacks for children returning to school after a recent Hurricane. They wanted to divide 144 pencils, 90 note pads and 36 granola bars evenly among the backpacks, without any supplies remaining. Find the largest number of backpacks can they pack?

1. Stanley Gudder. A Matheatical Journey. McGraw-Hill Publishing Company. 1976 (pg 121). [↑](#footnote-ref-1)