
Matchsticks

Matchsticks are rectangular prisms of wood measuring approximately .

$\frac{1}{10}$ inch by $\frac{1}{10}$ inch by 2 inches.



A tree trunk can be thought of as an approximate cone of wood.

The volume of a cone is found using the formula $\frac{1}{3}\pi r^2 h$, where r feet is the radius of the base of the cone and h feet is the height of the cone.

How many matchsticks can be made from a tree with a trunk with a base radius of 1 foot and a height of 80 feet?