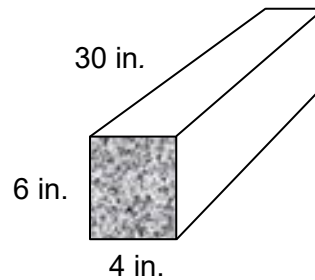


Determine the amount of cement, fine aggregate, coarse aggregate, and water required to mix and construct **three** beams, each having the dimensions shown in the figure below.



Include a "make-sure-you-have-enough" factor of 1.5 in your mix calculations. Assume a w/c ratio of 0.4 and a mix design of 1 : 1.5 : 2. Assume that concrete weighs 145 lb./ft.³. All weights should be reported in 0.05 lb. increments (the precision of the scale in lab).