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What Do Math and LEGOs Have in Common?

Standard optimization strategies combined with discrete mathematics and number theory allow us to show that the smallest number of unit squares needed to enclose A units of area is

$$P(A) = 2 \left\lceil 2\sqrt{A} \right\rceil + 4.$$

This question lends itself to interesting generalizations that include using different brick-shapes, imposing various weighting constraints, and the formulation of a "LEGOTM double bubble" problem comparable to the one solved by Dr. Frank Morgan. (Received September 24, 2012)