

## Problem 5: Terms of an Arithmetic Progression

---

We construct a sequence by picking a positive real number as the first term. Each subsequent term is the perimeter of a square whose area is the preceding term. If the first three terms form an arithmetic progression, determine all possible values of the third term.

As always, show your work, fully explain and justify your answer. A solution mainly obtained by computers or calculators will not be accepted.

---

Posting Date 3/5/2021. Submit solutions to Noah Aydin, Mathematics Department, RBH 319 by e-mail or hard-copy by 4 pm on March 19, 2021. An email submission must be a single pdf file. Hard copy submissions must be dropped in the file holder at my office door (Hayes 319) and must include a time stamp.