

Problem 7: Prime or not Prime?

Consider $2^n + 1$ where n is a positive integer that has an odd divisor. Is such a number ever prime? Prove your answer.

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 11/25/2023. Submit solutions to Noah Aydin, Mathematics Department, RBH 319 by e-mail or hard-copy by noon on Friday, December 8, 2023. 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.