Unit 2: Basic Proof Techniques Homework

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September 11, 2023

2.1 An odd integer is any integer that can be written as 2k + 1, where k is also an integer. However -1 is not an odd integer due to that there is no value in the 2n + 1

2.3 The product of two odd numbers, a and b, is an odd number. The integer expression can be expanded using the distributive property 2(2mn + m + n) + 1 = 4mn + 2m + 2n + 1

2.5 A number is irrational if it is not rational; that is, if it cannot be expressed as the ratio of any two integers or any fraction in two integers. 3 square root 2 is irrational