

# MBMT Number Theory Round – Brahmagupta

April 16, 2023

Full Name \_\_\_\_\_

Student ID Number \_\_\_\_\_

**DO NOT BEGIN UNTIL YOU ARE  
INSTRUCTED TO DO SO.**

This round consists of **8** questions. You will have **30** minutes to complete the round. Each question is *not* worth the same number of points. Questions answered correctly by fewer competitors will be weighted more heavily. Please write your answers in a reasonably simplified form.

\_\_\_\_\_ 1

\_\_\_\_\_ 2

\_\_\_\_\_ 3

\_\_\_\_\_ 4

\_\_\_\_\_ 5

\_\_\_\_\_ 6

\_\_\_\_\_ 7

\_\_\_\_\_ 8