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## HMMT November Online

### Theme Round Instructions

By "lowest terms", we mean that a rational number has been written as  $\frac{m}{n}$ , where  $n$  is a positive integer,  $m$  is an integer (possibly zero or negative), and  $|m|$  and  $|n|$  share no common prime factors. In particular if the answer is an integer (possibly zero or negative), then  $n = 1$  is the only possible value of  $n$ .

5. For a fraction in lowest terms  $\frac{a}{b}$ , please input  $a + b$ .
6. For a fraction in lowest terms  $\frac{a}{b}$ , please input  $a + b$ .
8. For a very large number, please represent your answer as  $a^b$  where  $a$  is a positive integer less than 10. Please input  $a + b$ .
9. For an answer in the form  $\frac{a+b\sqrt{c}}{d}$  where  $\sqrt{c}$  is in simplest radical form,  $a, b$  are integers, and  $d$  is a positive integer, input  $a + b + cd$ .