

## Turtle Fingers: Count the Values of k

Notice that there are not so many suitable values of  $x$  and  $y$  (since  $2 \leq a, b$  and  $2^{20} = 1\,048\,576$ ). This allows us to iterate through all suitable pairs of  $x$  and  $y$  and thus find all different suitable  $k$ .