

start with two fractions that sum to one

sum one

$$\frac{2}{5} \quad \frac{3}{5}$$

square the first and add the second

square the second and add the first

try this with several pairs of fractions that add up to 1

what happens?

start with any two fractions that sum to one

sum one



$$\frac{a}{b} \quad \frac{b-a}{b}$$

square the first and add the second



square the second and add the first

justify any results you found

what if one of the fractions is slightly bigger than 1?

what if both 'fractions' are integers?

they must
still sum to 1

sum one

$$\frac{1}{a} \times \frac{1}{b} + \frac{c}{d} \times \frac{1}{e} + \frac{f}{g} \times \frac{1}{h} = 1$$

'a' 'b' ... to 'h' must be the digits 2 to 9
used once only

sum one

$$\frac{1}{3} \times \frac{1}{b} + \frac{5}{8} \times \frac{1}{9} + \frac{7}{g} \times \frac{1}{4} = 1$$

'a' 'b' ... to 'h' must be the digits 2 to 9
used once only
so you now know most of them and it
remains to find out what 'b' and 'g' are