



2 Heads or Tails

Author Jacques Resing (TU Eindhoven)
Project: 4TU.AMI

Challenge

In the coin collection of Santa Clause, you will find a coin from the Republic of Heddonia. If you flip this coin, it shows heads with a probability of $3/4$ and tails with a probability of $1/4$. The coin collection also contains another coin from the Kingdom of Tailland, which shows tails with a probability of $3/4$ and heads with a probability of $1/4$.

Santa Clause flips both coins simultaneously; one coin comes up heads and the other one tails.

What is the probability p that the coin that comes up heads is the one from the Republic of Heddonia?



Artwork: Friederike Hofmann

Possible answers:

1. $p \leq 0.55$ holds.
2. $0.55 < p \leq 0.60$ holds.
3. $0.60 < p \leq 0.65$ holds.
4. $0.65 < p \leq 0.70$ holds.
5. $0.70 < p \leq 0.75$ holds.
6. $0.75 < p \leq 0.80$ holds.
7. $0.80 < p \leq 0.85$ holds.
8. $0.85 < p \leq 0.90$ holds.
9. $0.90 < p \leq 0.95$ holds.
10. $0.95 < p$ holds.