✓ Consider a standard 52-card deck of cards with 13 card values (Ace, King, Queen, Jack, and 2-10) in each of the four suits (clubs, diamonds, hearts, spades). If a card is drawn at random, what is the probability that it is a spade or a two? *1/1

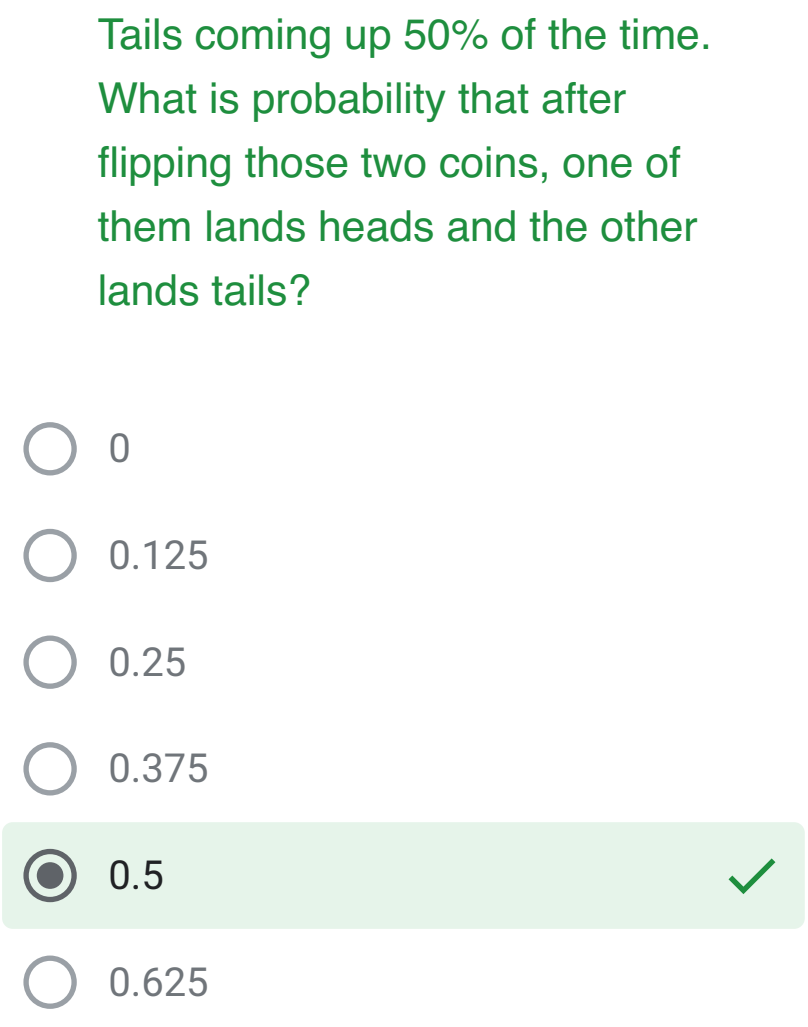
Note that "or" in this question refers to inclusive, not exclusive, or.

- About 0.019
- About 0.077
- About 0.17
- About 0.25
- ◉ About 0.308 ✓
- About 0.327
- About 0.5
- None of the above

✓ Imagine flipping two fair coins, where each coin has a Heads side and a Tails side, with Heads coming up 50% of the time and Tails coming up 50% of the time. What is probability that after flipping those two coins, one of them lands heads and the other lands tails? *1/1

- 0
- 0.125
- 0.25
- 0.375
- ◉ 0.5 ✓
- 0.625
- 0.75
- 0.875
- 1

The following question will ask you about the Bayesian Network shown in lecture, reproduced below.



✓ Which of the following sentences is true? *1/1

- Assuming we know there is track maintenance, whether or not there is rain does not affect the probability that the train is on time.
- Assuming we know there is track maintenance, whether or not there is rain does not affect the probability that the appointment is attended.
- ◉ Assuming we know the train is on time, whether or not there is track maintenance does not affect the probability that the appointment is attended. ✓
- Assuming we know there is rain, whether or not there is track maintenance does not affect the probability that the train is on time.
- Assuming we know the train is on time, whether or not there is rain affects the probability that the appointment is attended.

✓ Two factories — Factory A and Factory B — design batteries to be used in mobile phones. Factory A produces 60% of all batteries, and Factory B produces the other 40%. 2% of Factory A's batteries have defects, and 4% of Factory B's batteries have defects. What is the probability that a battery is both made by Factory A and defective? *1/1

- 0.008
- ◉ 0.012 ✓
- 0.024
- 0.028
- 0.02
- 0.06
- 0.12
- 0.2
- 0.429
- 0.6
- None of the above