✓ **Félicitations ! Vous avez réussi !**
POUR RÉUSSIR 75 % ou plus.

NOTE
100%

Continuer à apprendre

Practice quiz on Probability Concepts

TOTAL DES POINTS 9

1 / 1 point

1. If $x =$ "It is raining," what is $\sim (\sim x)$?

   ○ "It is never raining"
   ○ "It is always raining"
   ○ "It is not raining"
   ◉ "It is raining"

   ✓ **Correct**
   The second negation cancels out the first one.

   Similarly $\sim (\sim(\sim x)) ==> x$

1 / 1 point

2. If the statement "I am 25 years old" is assigned probability 0, what probability is assigned to the statement "I am not 25 years old?"

   ○ −1
   ◉ 1
   ○ 0
   ○ Unknown

   ✓ **Correct**
   It is always the case that $p(x) + p(\sim x) = 1$.

1 / 1 point

3. If I assign to the statement $x =$ "It will rain today" a probability of $p(x) = 0.35$, what probability must I assign to the statement "It will not rain today?"

   ◉ .65
   ○ 0
   ○ .5
   ○ .35

   ✓ **Correct**
   $p(x) + p(\sim x) = 1$

1 / 1 point

4. Is the following collection of statements a probability distribution?

   1. I own a Toyota pickup truck
   2. I do not own a Toyota pickup truck
   3. I own a non-Toyota pickup truck
   4. I do not own a non-Toyota pickup truck

   ○ Yes
   ◉ No

   ✓ **Correct**
   The statements are not exclusive! 1 and 4 could both be true, 2 and 3 could both be true, 2 and 4 could both be true, and even (1) and (3) could both be true (if I owned more than one pickup truck).

1 / 1 point

5. I don't know what it means to be "ingenuous." What probability would I assign to the statement, "I am ingenuous OR I am not ingenuous"?

   ○ .5
   ○ −1
   ◉ 1
   ○ 0

   ✓ **Correct**
   It is always the case, regardless of the content of the statement x, that $p(x$ or $\sim x) = 1$

1 / 1 point

6. A friend of mine circumscribes a circle inside a square, so that the diameter of the circle and the edge of the square are the same length. He asks me to close my eyes and pick a point at random inside the square. He says the probability that my point will also be inside the circle is $\frac{\pi}{4}$.

   Is this correct?