

What a 60 Percent Chance of Rain Actually Means

Name: _____

Date: _____

Class: _____

Read the lesson at myweatherrock.com/journal/explainers/chance-of-rain (or the printed copy), then answer below.

Remember

A 60 percent chance of rain means: given this setup, measurable rain (at least 0.01 inch) is expected at any given point in the forecast area 60 times out of 100. Formally it is confidence multiplied by coverage. It says nothing about how long it rains, how hard it rains, or which hour it picks.

Questions

1. The forecast says 60 percent chance of rain. What does the 60 describe?

- ☐ A. The share of the day it will rain
- ☐ B. The odds any given spot gets measurable rain
- ☐ C. How hard the rain will fall

2. A forecaster is 100 percent sure storms will hit half the area. What is the announced chance?

- ☐ A. 100 percent
- ☐ B. 50 percent
- ☐ C. 75 percent

3. It rained on a 20 percent day. Was the forecast wrong?

- ☐ A. Yes, 20 means it should not rain
- ☐ B. No, one in five days like this gets rain
- ☐ C. Only if it rained hard

4. Which day gives YOUR house better odds of rain: 100 percent confidence covering 40 percent of the area, or 50 percent confidence covering the whole area?

- ☐ A. The first, certainty wins
- ☐ B. The second, 50 beats 40
- ☐ C. They are identical

5. For the forecast to verify, how much rain must fall?

- ☐ A. Any drop at all
- ☐ B. At least 0.01 inch, the measurable threshold
- ☐ C. At least a tenth of an inch

In your own words

A friend cancels a picnic because the forecast says 30 percent chance of rain. Using what you learned, explain what that number really means and what you would ask before deciding.

Answer key (for the teacher)

1. The forecast says 60 percent chance of rain. What does the 60 describe?

B. The odds any given spot gets measurable rain — PoP is confidence times coverage: the odds of measurable rain at a point, not duration and not intensity.

2. A forecaster is 100 percent sure storms will hit half the area. What is the announced chance?

B. 50 percent — 1.0 confidence times 0.5 coverage is 0.5, announced as 50 percent.

3. It rained on a 20 percent day. Was the forecast wrong?

B. No, one in five days like this gets rain — A 20 percent chance rains one time in five. Being the one is not a forecasting error; it is arithmetic.

4. Which day gives YOUR house better odds of rain: 100 percent confidence covering 40 percent of the area, or 50 percent confidence covering the whole area?

B. The second, 50 beats 40 — Multiply them out: 1.0 times 0.4 is 40 percent; 0.5 times 1.0 is 50 percent. The half sure soaker gives you better odds.

5. For the forecast to verify, how much rain must fall?

B. At least 0.01 inch, the measurable threshold — PoP is the chance of MEASURABLE rain: 0.01 inch in the gauge. Stray drops do not count.