



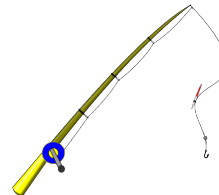
Problem of the Week

Problem B and Solution

Something's Fishy Here

Problem

Nawal went to a cottage on Otter Lake and went fishing every day in their favourite spot. After seven days, their catch included 18 bass, 5 pike, 13 bluegill, 2 perch, and 1 trout.



- Based on that week's fishing, what is the *experimental* probability (as a fraction in lowest terms) that the next fish Nawal catches is a bluegill? What is the experimental probability that the next fish Nawal catches is a trout?
- Suppose Nawal went fishing for another seven days in the same spot. What are some things you could predict about their catch, based on their previous experience?
- If Nawal went fishing in a new spot recommended by a friend, what could you predict about their catch in this spot, based on their previous experience?

Solution

- Nawal caught a total of $18 + 5 + 13 + 2 + 1 = 39$ fish.
Thus the experimental probability that the next fish Nawal catches is a bluegill is $\frac{13}{39} = \frac{1}{3}$. The experimental probability that the next fish Nawal catches is a trout is $\frac{1}{39}$.
- Since they are fishing in the same spot, we can predict that they will catch a total of about 39 fish, with a similar mix of bass, pike, bluegill, perch, and trout.
We can also predict that they will be more likely to catch bass or bluegill than pike, perch, or trout, given the proportions observed in their first week's catch.
- Since they are now fishing in a different spot, there wouldn't necessarily be the same types of fish, nor in the same proportions. On the bright side, since Nawal's friend recommended the spot, there may be more fish there than the previous spot.