Math On the Spot
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Calculating Experimental Probability of Compound Events

The experimental probability of a compound event can be found using recorded data.

EXAMPLE 1

Real World

TEKS 7.6.A

A food trailer serves chicken and records the order size and sides on their orders, as shown in the table. What is the experimental probability that the next order is for 3 pieces with cole slaw?

	Green Salad	Macaroni & Cheese	French Fries	Cole Slaw
2 pieces	33	22	52	35
3 pieces	13	55	65	55

STEP 1 Find the total number of trials, or orders.

$33 + 22 + 52 + 35 + 13 + 55 + 65 + 55 = 330$

STEP 2 Find the number of orders that are for 3 pieces with cole slaw: 55.

STEP 3 Find the experimental probability.

$$P(\text{3 piece + slaw}) = \frac{\text{number of 3 piece + slaw}}{\text{total number of orders}}$$

$$= \frac{55}{330}$$ Substitute the values.

$$= \frac{1}{6}$$ Simplify.

The experimental probability that the next order is for 3 pieces of chicken with cole slaw is $\frac{1}{6}$.

Math Talk
Mathematical Processes

Javier said the total number of orders is 8 and not 330. Is he correct? Explain.

YOUR TURN

1. Drink sales for an afternoon at the school carnival were recorded in the table. What is the experimental probability that the next drink is a small coffee?

	Soda	Water	Coffee
Small	77	98	60
Large	68	45	52

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