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GEOMETRY · 5 MINUTES · START RIGHT AWAY

Lesson 12-2b

Use the Test for Independence

Name _____ Date _____ Per _____

1 FLUENCY

$P(A) = 0.3$, $P(B) = 0.5$, and $P(A \text{ and } B) = 0.15$. Find $P(A \mid B)$. Are A and B independent?

$P(A \mid B) =$ ☐ Yes or No

2 VISUAL MODEL

100 students named their phone type (X or Y). Use the table to test for independence.

	X	Y	Total
Junior	24	16	40
Senior	36	24	60
Total	60	40	100

$P(X) =$ ☐

$P(X \mid \text{Junior}) =$ ☐

Independent?

Yes or No

3 APPLICATION

In a survey of 200 people, 80 like coffee. Of the 120 adults surveyed, 54 like coffee. Is liking coffee independent of being an adult?

$P(C) =$ ☐ $P(C \mid \text{adult}) =$ ☐ Yes or No

WORK

4 REASONING

Which statement does NOT show that events A and B are independent?

A $P(A \mid B) = P(A)$

B $P(B \mid A) = P(B)$

C $P(A \text{ and } B) = P(A) \cdot P(B)$

D $P(A \text{ or } B) = P(A) + P(B)$

_____

*We don't divide our effort, we **multiply** it!*

✎ Show your work ✓ Check your work ★ Try your best

Preview - the full worksheet and its answer key are at primeworksheet.com