

sex	age	weight	monthly_income	smoke_amount
Female	42	120	under \$2000	12 cig/day
Male	33	150	\$2000 to \$3000	0 cig/day
Female	27	110	\$5000 to \$6000	0 cig/day
⋮	⋮	⋮	⋮	⋮

1. Above is a part of a data frame displaying survey data studying smoking habits of Colorado residents. What type of variable is `monthly_income`?

- (A) Numerical (continuous)
- (B) Numerical (discrete)
- (C) Categorical (ordinal)
- (D) Categorical (nominal)

2. A political scientist is interested in the effect of government type on economic development. She wants to use a sample of 30 countries evenly represented among the Americas, Europe, Asia, and Africa to conduct her analysis. What type of sampling strategy should she use to ensure that countries are selected from each region of the world?

- (A) Simple random sampling
- (B) Cluster sampling
- (C) Stratified sampling
- (D) Multistage sampling

3. Participants in a study report whether or not they used a smart phone before bed and then rate their quality of sleep as either “very poor,” “poor,” “average,” “good,” or “very good.” A statistician analyzes the data and determines that the two variables are associated.

Is it reasonable to conclude that smart phone usage before bed causes a change in quality of sleep?

(A) Yes

(B) No

4. Students at an elementary school are given a questionnaire that they are asked to return after their parents have completed it. One of the questions asked is, “Do you find that your work schedule makes it difficult for you to spend time with your kids after school?” Of the parents who replied, 85% said “no.”

Is it reasonable to conclude that a majority of parents have no difficulty spending time with their kids after school?

(A) Yes

(B) No