





Smartphone use

The spreadsheet shows the population (in millions) and the number of smartphone users (in millions) for a range of countries in Asia. The data has been sorted by country name.





Column A 	Column B 	Column C 	Column D 
Country	Population (in millions)	Number of smartphone users (in millions)	Proportion of smartphone users
Bangladesh	166.735	8.921	
Indonesia	266.357	67.57	
Japan	125.738	65.282	
Malaysia	31.571	20.98	
Pakistan	200.663	23.228	
Philippines	105.341	28.627	
Thailand	68.416	30.486	
Turkey	81.086	44.771	
Vietnam	96.357	29.043	





1. Which operation on columns B and C will determine the correct values in Column D?





For each country:





- (a) Divide the Column B value by the Column C value: B/C
- (b) Divide the sum of the Column B and Column C values by the Column C value: $(B + C)/C$
- (c) Divide the Column C value by the Column B value: C/B
- (d) Divide the Column B value by the sum of the Column B and Column C values: $B/(B + C)$

2. The data for the proportion of smartphone users (expressed as a percentage) has been added to the spreadsheet in Column D. In addition, we provide this table sorted by population, sorted by number of smartphone users, and sorted by proportion of smartphone users (in ascending order each time).

Column A 	Column B 	Column C 	Column D 
Country	Population (in millions)	Number of smartphone users (in millions)	Proportion of smartphone users
Bangladesh	166.735	8.921	5%
Indonesia	266.357	67.57	25%
Japan	125.738	65.282	52%
Malaysia	31.571	20.98	38%
Pakistan	200.663	23.228	12%
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Thailand	68.416	30.486	45%
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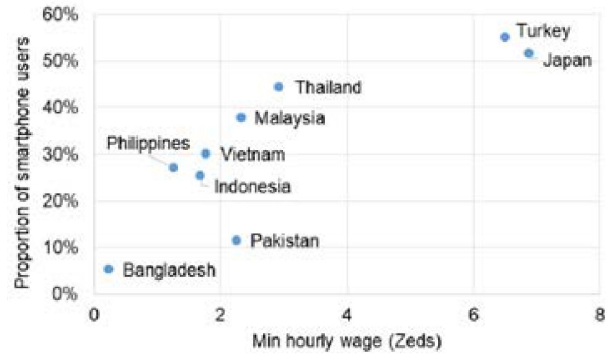
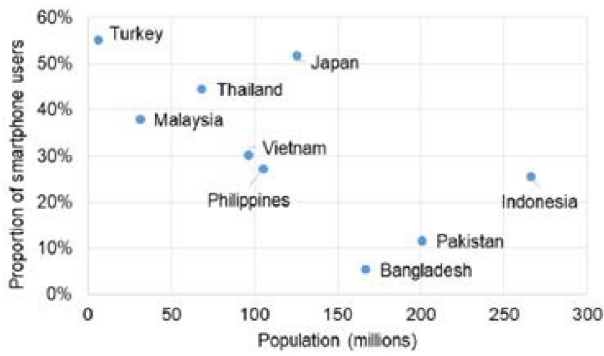
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For each of the following statements, identify if they are **True** or **False**.

- The country with the largest population also has the largest number of smartphone users.
- The country with the fewest number of smartphone users also has the smallest population.
- The country with the highest proportion of smartphone users also has the smallest population.
- The country with the median proportion of smartphone users is also the country with the median number of smartphone users.

3. The two graphs below plot the proportion of smartphone users per country in terms of either the Population (in millions) and the Minimum hourly wage (in Zeds) for each country. Study the different graphs and answer the question.



For which variable (population or minimum hourly wage) does the proportion of smartphone users in a country increase as the variable value increases? Explain your reasoning.