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## Quantitative Analysis Assignment

### POLS 1100: Worksheet #1

Use the table below to answer questions 1, 2 and 3.

State	Median Household Income	Median Price of House
Utah	\$ 55,220.00	\$ 146,100.00
Colorado	\$ 55,517.00	\$ 166,600.00
Wyoming	\$ 52,433.00	\$ 96,600.00
Idaho	\$ 46,136.00	\$ 106,300.00
Montana	\$ 43,000.00	\$ 99,500.00

Question 1: What do we mean by terms like “median household income” and “median house price”? What is meant by terms like “median household income” and “median house price” is the middle value of a range of numbers.

Question 2: Which state has the highest median household income, and which state has the lowest? The state that has the highest median household income is Colorado, and Montana has the lowest median household income.

Question 3: What is Montana’s household income as a percentage of Utah’s. Explain how you arrived at your answer. Montana’s household income is 78% of Utah’s. I arrived at that answer by doing this formula  $\$43,000/\$55,220 \times 100 = 77.8\%$  (round it up).

Question 4: Which state has the highest median family income as a percentage of the median house price in that state? Explain how you arrived at your answer. Wyoming has the highest median family income as a percentage of the median house price in that state. They are at 54%. I arrive at that answer by dividing all of the 5 state’s median family income by the median house price. The formula used for Wyoming as an example is  $\$52,433/96,600 \times 100 = 54.3\%$  (round it down.)

(Over)

Use the table below to answer questions 5 and 6.

Candidate	Number of Donors	Money Raised
Mr. Salinger	895	\$180,000
Mrs. Shelley	1,562	\$200,000
Mr. Vonnegut	367	\$190,000
Ms. Atwood	505	\$140,000

Question 5: Overall, which candidate raised the most money per donor? Explain how you arrived at your answer. Mr. Vonnegut raised the most money per donor. The mean dollars raised per donor was \$518. I used this formula to arrive at my answer.  $\$190,000/367 = \$518$ . I used this same formula for each candidate.

Question 6: Calculate Ms. Atwood's number of donors as a percentage of Mrs. Shelley's. Explain how you arrived at your answer. Ms. Atwood's number of donors as a percentage of Mrs. Shelly's is 32%. I used this formula to arrive at my answer:  $505/1562 \times 100 = 32\%$

Question 7: Between the four candidates, what is the mean amount of money raised? Explain how you arrived at your answer. Between the four candidates, the mean amount of money raised is \$177,500. I used this formula to arrive at my answer:  $\$180,000 + \$200,000 + \$190,000 + \$140,000 = \$710,000$   $\$710,000/4 = \$177,500$ .

Question 8: Between the four candidates, what is the mean number of donors? Explain how you arrived at your answer. Between the four candidates, the mean number of donors is 832. I arrived at the answer by using this formula:  $895 + 1562 + 367 + 505 = 3329$   $3329/4 = 832.25$  (round it down.)

Question 9: Calculate Mr. Salinger's money raised as a percentage of that raised by Mr. Vonnegut. Explain how you arrived at your answer. The money that Mr. Salinger raised as a percentage of the money that was raised by Mr. Vonnegut is 95%. I arrived at that answer by using this formula.  $\$180,000/\$190,000 = .947 \times 100$  is 95% (rounding up).

Question 10: Comparing Mr. Salinger and Ms. Atwood, which candidate raised the most money per donor? Explain how you arrived at your answer. Comparing Mr. Salinger and Ms. Atwood, Ms. Atwood raised more money per donor at \$277. I arrived at that answer by using this formula: Mr. Salinger  $\$180,000/895 = \$201$ . Ms. Atwood  $\$140,000/505 = \$277$ .  $\$277 > \$201$ . Therefore Ms. Atwood raised more money per donor than Mr. Salinger.