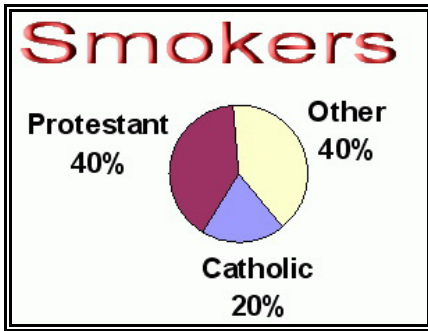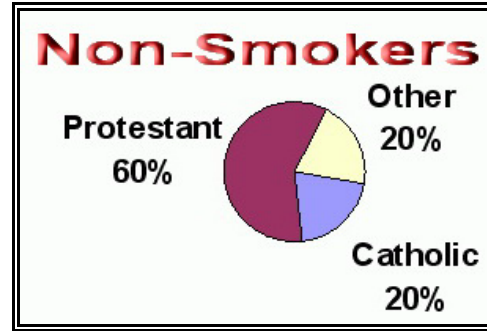Name: _____

Do these statements accurately describe the data in <u>pie chart #1</u> below?

1. The percentage of Protestants who are smokers is 40%.
   a. Yes     b. No      c. Don't know or Not sure

2. The percentage of smokers who are Protestants is 40%.
   a. Yes     b. No     c. Don't know or Not sure



Pie Chart #1               Pie chart #2

Do these statements accurately compare data in <u>pie chart #2</u> with data in pie chart #1?

3. Protestants are more likely to be smokers than to be non-smokers.
   a. Yes     b. No      c. Don't know or Not sure

4. Smokers are more likely among Protestants than among Catholics.
   a. Yes     b. No      c. Don't know or Not sure

5. Non-smokers are more likely to be Protestants than are smokers.
   a. Yes     b. No      c. Don't know or Not sure

6. Non-smokers are more prevalent among Protestants than among Catholics.
   a. Yes     b. No      c. Don't know or Not sure

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7. Last year's budget was $4 million; this year it's $4.4 million. What is the percent change?
   a. $400,000 increase    b. 4% increase    c. 10% increase    d. 40% increase    e. None of these

8. An oil tanker hit a rock offshore from your city and spilled about 180,000 gallons of crude oil. How many swimming pools would the spilled oil fill if a swimming pool holds 12,000 gallons?
   a. 0.07    b. 1.5    c. 7    d. 15    e. 70    f. 168,000    g. None of these

9. If the price of a stock decreases by 50% and then increases by 50%, it will be back to its original value.
   a. True    b. False    c. Don't know

Table 1: US Women (in millions) who had a child in 2004 by family income

| < 10K | 10K-19.9K | 20K-24.9K | 25K-29.9K | 30K-34.9K | 35K-49.9K | 50-74.9K | 75K and up | TOTAL |
|---|---|---|---|---|---|---|---|---|
| 4.2 | 6.2 | 3.4 | 3.8 | 3.6 | 8.9 | 10.6 | 12.5 | 53.2 |

Source 2006 US Statistical Abstract. Table 88.

10. Suppose we define 'Rich' as those with family income of $35K and higher; 'Poor" as those with family income under $35K. Based on family income in Table 1, having children was more frequent among which group: rich moms or poor moms?
    a. Rich moms     b. Poor Moms     c. The same……d. Don't know or Not sure

11. Suppose people are classified in two groups: rich and poor.  If incomes of rich and poor people both increase at the same rate, then the income gap between rich and poor.
    a. will decrease        b. will stay the same        c.  will increase        d.  Don't know

12. If earnings drops by $600,000 from +$300,000 to -$300,000, this is a 200% decrease.
    a. Yes          b. No          c. Don't know or not sure

13. A city of 150,000 had 75 murders last year. What is the murder rate per 100,000?
    a. 30        b. 50        c. 75      d. 150      e. 500      f.  None of these

14. A poll of 400 randomly sampled voters shows the two candidates at 46% and 54%.  The margin of error is 5 percentage points.  Is this difference statistically significant?
    a.  Yes          b.  No          c.  Don't know or Not sure

15. The budget was cut from $2 million to $1.5 million. What was the percent change?
    a. 75% decrease        b. 25% decrease        c. 75% increase      d. 25% increase    e. None of these

16. A study shows that doing yoga cuts the frequency of migraines.  Could this study have been done as a classic before-after experiment where the number of migraines per month before doing yoga is compared with the number of migraines per month after doing yoga for the same group of people?
    a. Yes        b. No      c. Don't know or can't tell

17. Which definition of "heat-wave deaths" gives the largest number?
    a.    deaths caused by a heat wave
    b.    deaths occurring during a heat-wave.
    c.    No difference
    d.    Don't know or not sure

18. Eight is 300% more than two.
    a. True      b. False      c. Don't know

19. Suppose Jim finishes 20% of his job and Jan finishes 60% of her job.  Suppose that Jim's part is 80% of the project and Jan's part is 20%.  How much of the total project is done?
    a. 20%      b. 28%      c. 32%      d. 40%      e. 52%      f. None of these      g. Don't know; Not sure

20. The city managers in five towns are paid $75,000, $80,000, $65,000, $120,000 and $60,000 a year.  What is their median annual salary?
    a. $65,000        b. $75,000        c. $80,000        d. $85,000        e. None of these

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A.  What is your demographic?
    a. Faculty   b. Graduate student   c. Undergraduate student   d. high school student   d. Staff   e. Other

B.  How quantitative is/was your major in college as an undergraduate?
    a. Not applicable
    b. Non-quantitative: English, Secondary Education, Art, music, communication, political Science, etc.
    c. Quantitative (algebra): business, economics, psychology, sociology, social work, nursing, Biology
    d. Highly quantitative (Calculus): mathematics, statistics, physics, chemistry)

C.  At what age did you first learn to speak English?
    a. Before age 5        b. 5 to 10        c. 10 to 18        d. 18 plus

D.  Which courses are you taking or have completed?   *Circle all that apply.*
    a. College algebra      b. Calculus I        c. Statistics/Quantitative methods/Research methods
    d. Math for Liberal Arts        e. Quantitative Reasoning/Literacy        f. Statistical Literacy