## Question 1

The table below outlines the costs of a certain company over an eight-year time frame. All amounts given are in millions of US dollars.
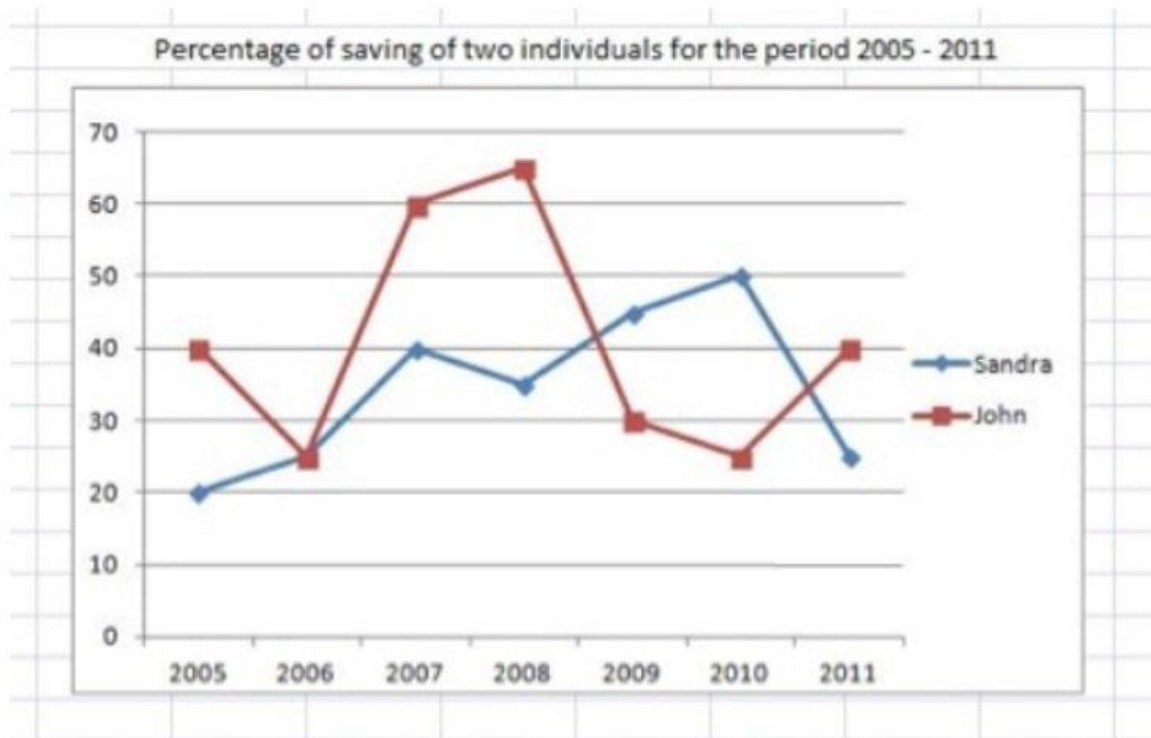
| Year of Business Expense (all expenses in millions of dollars) | Salary | Rent | Maintenance Facility | Equipment Purchase | Utilities | Dividends Stock | Payments Interest | Research & Development |
|---|---|---|---|---|---|---|---|---|
| 2000 | 43.24 | 0.23 | 1.2 | 15 | 0.2 | 4.362 | 21.4 | 4.2 |
| 2001 | 44.53 | 0.25 | 2.1 | 19 | 0.6 | 5.291 | 23.7 | 4.7 |
| 2002 | 39.72 | 0.28 | 1.5 | 14 | 0.1 | 4.778 | 26.8 | 6.4 |
| 2003 | 42.94 | 0.31 | 1.5 | 33 | 0.5 | 3.224 | 32.5 | 5.3 |
| 2004 | 41.36 | 0.31 | 2.3 | 9 | 0.7 | 5.645 | 19.6 | 5.9 |
| 2005 | 43.37 | 0.34 | 1.1 | 21 | 1.2 | 5.273 | 22.3 | 6.6 |
| 2006 | 44.02 | 0.33 | 1.6 | 13 | 0.3 | 6.316 | 25.4 | 6.2 |
| 2007 | 46.51 | 0.36 | 2.4 | 27 | 0.6 | 6.829 | 18.1 | 5.1 |

**Each column of the table can be sorted in ascending order by clicking on the word "Select" above the table and choosing, from the dropdown menu, the heading of the column on which you want the table to be sorted.**

**For each of the following statements, indicate whether it accurately represents the data for 2004. Indicate "Yes" if the statement is accurate and "No" if the statement is not.**

| Yes | No | |
|-----|-----|---|
| | | Rent paid was equal to the median rent paid for the eight-year period. |
| | | The total cost in the categories shown decreased as compared to 2003. |
| | | Interest payments experienced the highest year-over-year drop for the eight-year period. |

## Question 2



Percentage of saving of two individuals for the period 2005 - 2011

The figure above plots the percent of their incomes that John and Sandra each saved each year from 2005 to 2011.

**1. If Sandra spent a total of $26000 in 2008, how much money did she save in 2008?**

A. $4000
B. $14000
C. $18000

**2. The incomes of Sandra and John in 2007 were in the ratio 4:5. What was the ratio of their expenses?**

A. 4:5
B. 5:4
C. 6:5

**3. If Sandra and John each saved $18000 in 2009, what was the difference in their incomes in that year?**

A. $2700
B. $15000
C. $20000

## Question 3

Use the table that follows on Percentage of Dogs Attending Selected Training Classes, Single Year, to answer the question that follows.

| BREED | AGILITY | OBEDIENCE | SERVICE TRAINING | SEARCH & RESCUE |
|---|---|---|---|---|
| Australian shepherd | 37 | 19 | 22 | 44 |
| Boxer | 18 | 25 | 36 | 8 |
| Doberman pinscher | 34 | 21 | 13 | 12 |
| German shepherd | 55 | 27 | 42 | 68 |
| Husky | 26 | 17 | 34 | 44 |
| Rottweiler | 20 | 25 | 17 | 32 |

| Weimaraner | 12 | 14 | 9 | 5 |

**For each of the following statements, select Would help explain if it would, if true, help explain some of the information in the table. Otherwise select Would not help explain.**

| Would help explain | Would not help explain | |
|---|---|---|
| | | German shepherds as a breed are naturally obedient. |
| | | Weimaraners are the most popular breed of service dog. |
| | | Boxers lack the physical strength needed for search and rescue activities. |

## Question 4

The table below gives information on the total vehicles sold and the total sales revenue for a national Internet auto dealer over a four-year period, from 2011 through 2015. The 23 models were included in the table because they fall among the top 30 models sold by the company in terms of both the total number sold and total sales revenue. In addition to listing the total number sold and total sales revenue for each vehicle model, the table also gives the percent of increase or decrease over the 2006–2010 numbers sold and sales revenue and the rank of each vehicle model for total number sold and total sales revenue.

**Table: Sorted by Make (Column 2)**

## Sorted by Make (Column 2)

| VEHICLE | | | NUMBER SOLD | | | SALES REVENUE | | |
|---|---|---|---|---|---|---|---|---|
| MODEL | MAKE | COLOR | NUMBER | % CHANGE | RANK | AMOUNT | % CHANGE | RANK |
| Focus | Ford | White | 4,703 | 2 | 3 | 77,599,506 | −6.0 | 8 |
| Fusion | Ford | Black | 4,337 | −6.2 | 7 | 86,740,772 | −0.1 | 5 |
| Escape | Ford | Blue | 4,326 | 6 | 8 | 90,846,301 | −2.0 | 4 |
| Fiesta | Ford | Red | 3,584 | −8.0 | 9 | 46,592,004 | −0.8 | 19 |
| Focus | Ford | Green | 1,876 | 0.7 | 25 | 31,014,032 | −0.9 | 25 |
| Fit | Honda | Black | 3,569 | 7.8 | 10 | 53,535,055 | −1.9 | 16 |
| Civic | Honda | White | 2,984 | 1.7 | 13 | 44,760,490 | −7.0 | 20 |
| Accord | Honda | Blue | 2,876 | 1.2 | 14 | 60,396,593 | −2.0 | 11 |
| Element | Honda | Red | 2,875 | −2.9 | 15 | 60,375,391 | −3.2 | 12 |
| Sportage | Kia | Silver | 2,070 | 0.5 | 21 | 76,490,231 | 0.1 | 9 |
| Forte | Kia | Blue | 2,068 | 0.6 | 22 | 32,234,465 | −0.3 | 23 |
| Soul | Kia | Green | 1,927 | 1.2 | 23 | 48,892,345 | 0.2 | 18 |
| Optima | Kia | Red | 1,907 | 0.9 | 24 | 43,678,210 | −0.4 | 21 |
| Outlander | Mitsubishi | White | 4,573 | −4.7 | 4 | 99,752,338 | −6.1 | 1 |
| Galant | Mitsubishi | White | 2,493 | 9.7 | 16 | 55,646,253 | −8.1 | 13 |
| Eclipse | Mitsubishi | Green | 2,076 | 0.4 | 19 | 42,547,620 | −4.0 | 22 |
| Forester | Subaru | Silver | 4,721 | 3.4 | 2 | 98,811,903 | −2.5 | 3 |
| Outback | Subaru | Blue | 4,513 | 1.3 | 5 | 98,812,913 | −0.7 | 2 |
| Impreza | Subaru | Red | 4,349 | 9.2 | 6 | 73,933,449 | −2.0 | 10 |
| Legacy | Subaru | Black | 2,996 | −0.3 | 12 | 53,928,527 | −0.4 | 14 |
| Corolla | Toyota | Blue | 4,937 | 1.2 | 1 | 78,995,520 | −0.3 | 7 |
| Tacoma | Toyota | Red | 3,345 | 9.6 | 11 | 79,206,444 | −3.5 | 6 |
| Prius | Toyota | Black | 2,192 | −3.1 | 18 | 52,390,992 | −2.3 | 17 |

**Review each of the statements below. Based on the information provided in the table, indicate whether the statement is true or false.**

| True | False | |
|------|-------|---|
| | | More Ford Focuses than Toyota Corollas were sold by this retailer. |
| | | The highest-selling blue model from each manufacturer was outsold by at least one other model from the same manufacturer. |
| | | The Kia models all ranked lower than 20th in sales revenue. |
| | | No green car was among the top ten cars by rank in either numbersold or sales revenue. |

## Question 5

### Tab 1: E-mail #1

*USFS Publications Director to County Commissioners of Western Colorado*
*July 1, 9:12 A.M.*

Due to the pine beetle infestation in the Rocky Mountain National Forest in Colorado, the U.S. Forest Service is required to provide estimates of the number of acres affected and the numbers of dead trees per acre. These numbers are based on USFS aerial photos and county field observation reports.

Each county in Colorado must submit its field reports to the USFS by October 1, for the publication of statewide maps of the affected areas.

The Forest Service will compile the data from photos and county field observation reports for its annual report to Congress. Please see the attached list of counties that must comply with the reporting requirements. Counties with no Forest Service lands are not required to participate. Field observation reports must follow the designated format found in the document attached.

We rely on your cooperation to fulfill this reporting requirement and would remind you to take all necessary precautions to ensure the safety of your field observers in the infested areas.

## Tab 2: E-mail #2

*County Commissioner of Summit County in Response to USFS Publications Director's E-mail of July 1*
*July 5, 11:45 A.M.*

Regarding field observation reports of pine beetle infestation: our county budget has been reduced by the recent economic downturn. Will there be funds available for hiring field observers, data entry workers, and report writers? We estimate that compliance with the reporting requirements will cost an estimated $286,000. Please advise.

## Tab 3: E-mail #3

*USFS Publications Director in Response to Summit*
*County Commissioner's E-mail of July 5*
*July 8, 7:30 A.M.*

Our understanding is that reporting costs will be reimbursed to you based on a percentage of the actual number of affected acres in your county. Keep in mind that the number of affected acres in your county is based on last year's estimates of total affected acreage. If you observe an increase, it must correlate with this year's aerial photos to qualify for increased reimbursement costs. Current reimbursement costs are calculated at 70% of total acreage, with a per-acre reimbursement of $6.00.

**1. Suppose that Summit County completes the reporting required by the Forest Service, and its reporting costs total $286,000. If all of the information in the three e-mails is accurate, in order for Summit County to be reimbursed for its entire reporting costs, the number of acres affected by the pine beetle infestation in the county would have to be closest to:**

A. 29,762
B. 33,092
C. 47,667
D. 68,096
E. 72,132

**2. Consider each of the following statements. Does the information in the three sources support the inference as stated?**

| Yes | No | |
|---|---|---|
| | | The Summit County Commissioner plans to hire workers to provide reporting assistance to meet the Forest Service's requirements. |
| | | The Forest Service is mostly like to reimburse Summit County for 70% of its reporting costs. |
| | | The Summit County Commissioner believes Summit County has experienced an increase over the previous year in the total number of forest acres affected by the pine beetle infestation. |