

GMAT IR PRACTICE PAPER

GRAPHICS REPRESENTATION

1.

Each point on the scatter plot shows the final score of one of the 20 football games played by the Airyvale Axles during the team's 2007 season.

Use the drop-down menus to complete each statement according to the information in the graph.

The Axles lost most nearly _____ percent of the 20 games they played in 2007.

- A. 5
- B. 25
- C. 50
- D. 75
- E. 85

In 2007, the median score of the opponents of the Axles was most nearly _____.

- A. 3
- B. 15
- C. 21
- D. 24
- E. 31

2.

The chart shows the total average rainfall for 10 countries for each of three years.

For each statement, select the option from the drop-down menu that completes the statement as accurately as possible according to the information provided.

The total rainfall in _____ was about 72 percent greater in 2010 than in 2000.

- A. Greece
- B. India

- C. Japan
- D. Panama

The difference between the 2010 rainfall in India and the 2010 rainfall in Greece is closest to the difference between the 2005 rainfall in Brazil and the 2005 rainfall in_____.

- A. India
- B. Mozambique
- C. Panama
- D. Thailand

3.

The graph shows the results of a scientific study of people's daily sleeping habits.

Use the drop-down menus to complete each statement according to the information in the graph.

For approximately_____ consecutive hours each day, more than 50 percent of the population is awake.

- | | |
|----|----|
| A. | 11 |
| B. | 12 |
| C. | 13 |
| D. | 14 |
| E. | 15 |

The percent increase in the number of people sleeping from 8:00 pm to 10:00 pm is approximately_____that from 10:00 pm to 12:00 am.

- | | | |
|----|---------------|-------|
| A. | four | times |
| B. | equal | to |
| C. | one-fourth of | |

4.

A ferry company transports people among a set of islands. The map shows the cost of a one-way trip from one island to the next. If the map shows no direct connection between two islands, then there are no available ferries for that immediate route.

For each statement, select the option from the drop-down menu that completes the statement as accurately as possible according to the information provided.

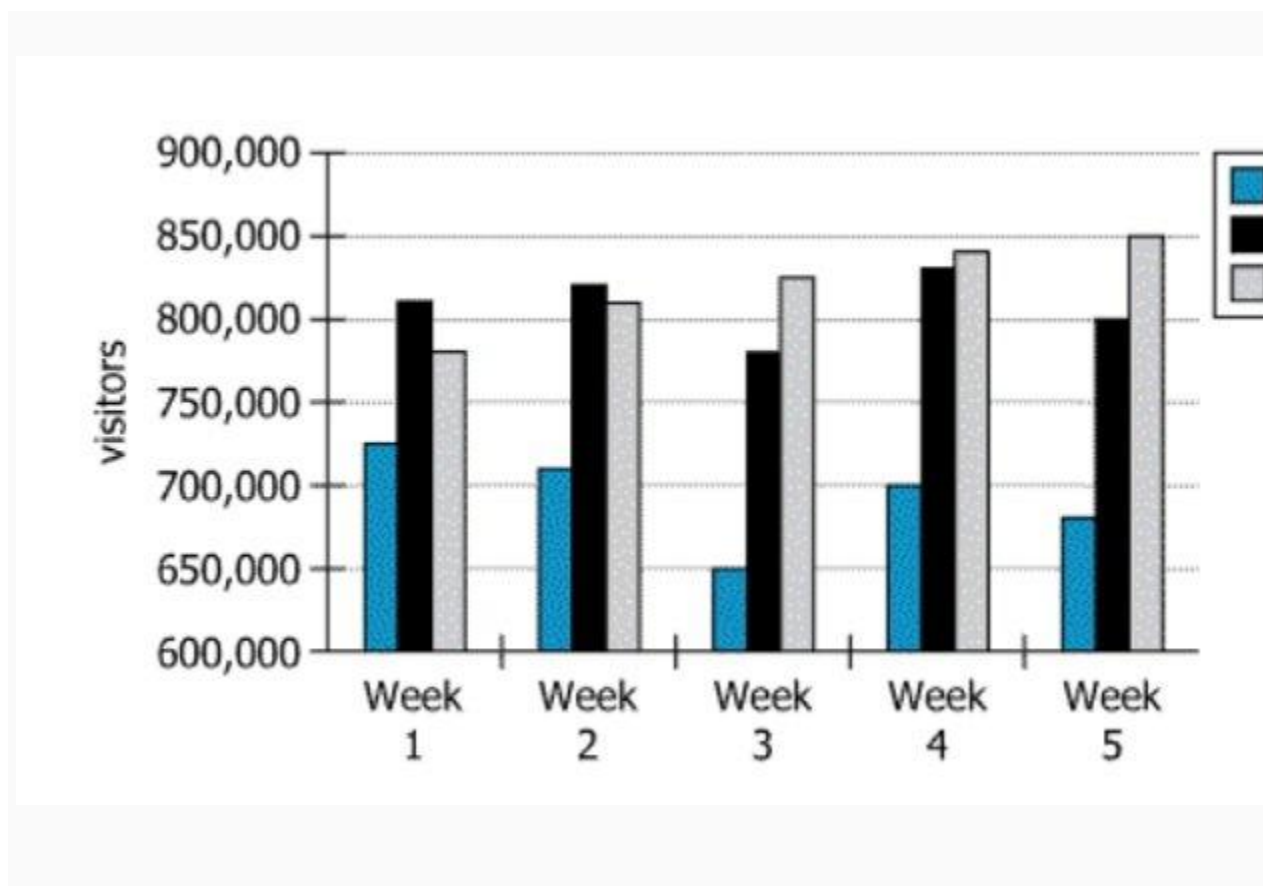
If a passenger starts at island A and ends at island G, it would cost_____more for the least expensive trip that includes island F than for the least expensive trip the passenger could take.

- A. \$5
- B. \$10
- C. \$15

There are _____ possible islands that a passenger could visit starting at island F and spending no more than \$70.

- A. 2
- B. 3
- C. 4
- D. 5

5.



The graph shows, for the first five weeks in each of three years, the number of visitors to websites devoted to real estate in New Zealand.

Select from the drop-down menus the options that complete the statement so that it most accurately reflects the information provided in the graph.

For the 15 weeks shown, the range of numbers of visitors is equal to the number for_____.

A.	Week	5,	2009,	minus	that	for	Week	1,	2007
B.	Week	5,	2009,	minus	that	for	Week	5,	2007
C.	Week	5,	2009,	minus	that	for	Week	3,	2007

For the 15 weeks shown, the range of numbers of visitors is _____ the median of the numbers of visitors.

- A. Less than
- B. Equal to
- C. Greater than

MULTI-SOURCE REASONING

1.

A food bank is creating a plan to distribute meals that are designed based on the US government's Dietary Guidelines. The food bank's goal is to provide meals that meet those guidelines for men and women. The ideal is a variety of single meals, each of which fulfills one-third of the government's total daily guidelines in five nutritional categories: protein, carbohydrates, dietary fiber, fat, and calories. The food bank defines a major meal as a meal that meets the government's Dietary Guidelines. Additionally, the meals are designed to incorporate a number of foods to meet each of the nutrient requirements while also being appealing and varied.

Tab 2: Dietary Guidelines

The table shows the US Government's Dietary Guidelines for daily total intake in five nutritional categories for both men and women.

Tab 3: Food Values

The table below provides nutritional values for a standard portion, as defined by the food bank, of each of the listed foods.

1. Consider a meal consisting of a standard portion of each of the following: white fish, baked potato, butter, mixed salad with dressing, whole wheat bread, and raw apple. For each of the following answers, select True if the statement can be concluded from the information. Otherwise, select False.

True	False	
		This meal provides more than one-half of the Dietary Guidelines's daily recommended protein for a man.
		This meal provides more than one-third of the Dietary Guidelines's daily recommended calories for a woman but fewer than one-third of the daily recommended calories for a man.
		This meal fits the food bank's definition of a major meal for either a man or a woman.

2. According to the information in the tabs, and assuming a single standard portion of each kind of food, which of the following meals provides the highest amount of dietary fiber?

- A. Lean meat, whole wheat pasta, mixed salad with dressing, orange
- B. Lean meat, baked potato, butter, mixed vegetables, orange
- C. Lean poultry, baked potato, margarine, cooked peas, whole wheat bread, apple
- D. Tilapia fish, baked potato, butter, mixed vegetables, whole wheat bread, apple
- E. White fish, whole wheat pasta, mixed salad with dressing, whole wheat bread, orange

3. Consider a meal consisting of one standard portion of each of the following: lean meat, whole wheat pasta, and mixed vegetables. Consider each of the statements below separately and choose True if the statement is accurate based on the information provided. Otherwise, choose False.

True	False	
		More than half of the meal's total calories come from whole wheat pasta.
		Adding a standard portion of boiled eggs would increase the total protein content of the meal by more than 20%.
		If the whole wheat pasta were removed and replaced with one standard portion each of whole wheat bread and potatoes, the total carbohydrate content of the meal would be increased.

2.

Of the three phones we tested, the Chieftain has the fastest processor by far, as well as the best search interface. This makes it ideal for anyone planning to download and use a variety of applications. However, the baseline phone's memory will fill quickly; we do not recommend purchasing this phone without also purchasing an additional memory card.

Tab 2: Estrella

The Estrella LS is the phone for those who value visuals. The spacious screen is not only the largest of the three reviewed but is also the best at displaying true, bright color. Sadly, although the Estrella is excellent for photography and web browsing, its unusually slow processor stops it from running the high-definition games that would take advantage of its excellent display.

Tab 3: Radical

Cortana's newest phone, the Radical, isn't new at all. Nearly unchanged from a previous model, the Radical is a middle-of-the-pack phone that doesn't distinguish itself in any way (except for its weight—it's the heaviest of the three reviewed). Nonetheless, it functions adequately in all respects. Lacking any major deficiencies, it will serve for customers concerned with economy.

1. For each of the following statements, indicate yes if the statement can be reasonably inferred from the tabbed reviews. Otherwise, indicate no.

Yes	No	
		The phone with the largest discount (in dollars) for purchasing a contract has the most memory.
		No front camera has more than 25 percent of the resolution, measured in megapixels, of a back camera.
		The reviewers considered factors other than those in the tables when writing their reviews.

2. For each of the following statements, select would help explain if the statement would, if true, help explain some of the information in the tabbed reviews. Otherwise select would not help explain.

Would help explain	Would not help explain	
		The Chieftain was more heavily advertised than the other two phones.
		Critics, unlike customers, don't pay for the products they review and are therefore less likely to let low prices influence their reviews of budget electronics.
		Using lighter parts to make a phone significantly increases manufacturing costs.

3. If the phone with the smallest screen has received 40 critical ratings, how many additional 5-star critical ratings must it receive to improve its average critical rating to 4.5?

- | | |
|----|----|
| A. | 4 |
| B. | 8 |
| C. | 12 |

D.
E. 20

16

3.

Tab 1: Year 10

At the Moslund Plant, the assembly line consists of 3 conveyor belts. In addition, there are 3 inspection posts, one at the end of each conveyor belt. In Year 10 (Y10), 15 workers were employed directly on the line; 3 of these workers staffed the inspection posts, one at each post. In Y10, the Moslund Plant assembly line had an output of 250,000 units and generated a profit of \$15,000,000.

Tab 2: Year 11

For Year 11 (Y11), the Moslund Plant assembly line was modernized as follows:

- Conveyor-belt speeds were increased by a fixed percentage.
- The assembly line's administrative unit was restructured to maximize efficiency.
- Each inspection post was automated, and the 3 workers who formerly staffed the posts were laid off and were not replaced.
- There were no other personnel changes on the assembly line for Y11.

Tab 3: Table

Attachment:

Moslund Plant Assembly Line Modernization, Y11

Element of modernization project	Resulting increase in output for Y11, as % of Y10 output	Resulting increase in profit for Y11, as % of Y10 profit	Total cost to implement
Inspection-post automation	2%	5%	\$100,000
Conveyor-belt speed increase	3%	4%	\$45,000
Administrative unit restructuring	—	1%	\$15,000
Total	5%	10%	\$160,000

2.jpg [67.8 KiB | Viewed 19206 times]

1. Which one of the following statements is supported by the information provided about the assembly line and the assembly-line modernization plan at the Moslund Plant?

- A. On the assembly line, conveyor-belt speed is directly proportional to total annual output of assembled units.
- B. Administrative unit restructuring accounted for the greatest increase in the dollar amount of profit from Y10 to Y11.
- C. Conveyor-belt speed increase accounted for the greatest increase in the dollar amount of profit from Y10 to Y11.
- D. Conveyor-belt speed increase accounted for the greatest increase in annual output of assembled units from Y10 to Y11.
- E. Inspection-post automation accounted for the greatest increase in annual output of assembled units from Y10 to Y11.

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2. For a given production year, let Q denote the total output, in assembled units, from the Moslund Plant assembly line, and let N denote the number of workers employed directly on the line. For each of the following statements about the quotient Q/N , select Yes if it is true based on the information provided. Otherwise, select No.

Yes	No	
		Q/N was less than 10,000 for Y10.
		Q/N was unchanged from Y10 to Y11.
		Q/N remained below 30,000 in Y10 and Y11.

4.

TAB 1: New Music Format

In September 1997, one week after Philadelphia's long-time commercial classical station, WFLN, was sold for \$85,000,000 and changed formats, Temple University's WRTI, an all-jazz station since 1958, acquired WFLN's collection and added classical music to its format.

On weekdays, WRTI would air classical music from 6 a.m. until 6 p.m., and jazz from 6 p.m. until 6 a.m. Saturday daytime hours were devoted to classical music (except for a 30-minute talk show at 6 a.m. and a 40-minute arts news show at 11 a.m.), while Sunday daytime hours were devoted to gospel or jazz until 3 p.m. Weekends also included syndicated programs such as Piano Jazz, Jazz 20 Profiles, and From the Top, as well as live broadcasts of performances by the Metropolitan Opera in season.

WRTI's swift move not only prevented the demise of classical music radio in the nation's sixth largest market but also benefited the station by drawing increased listeners and contributions.

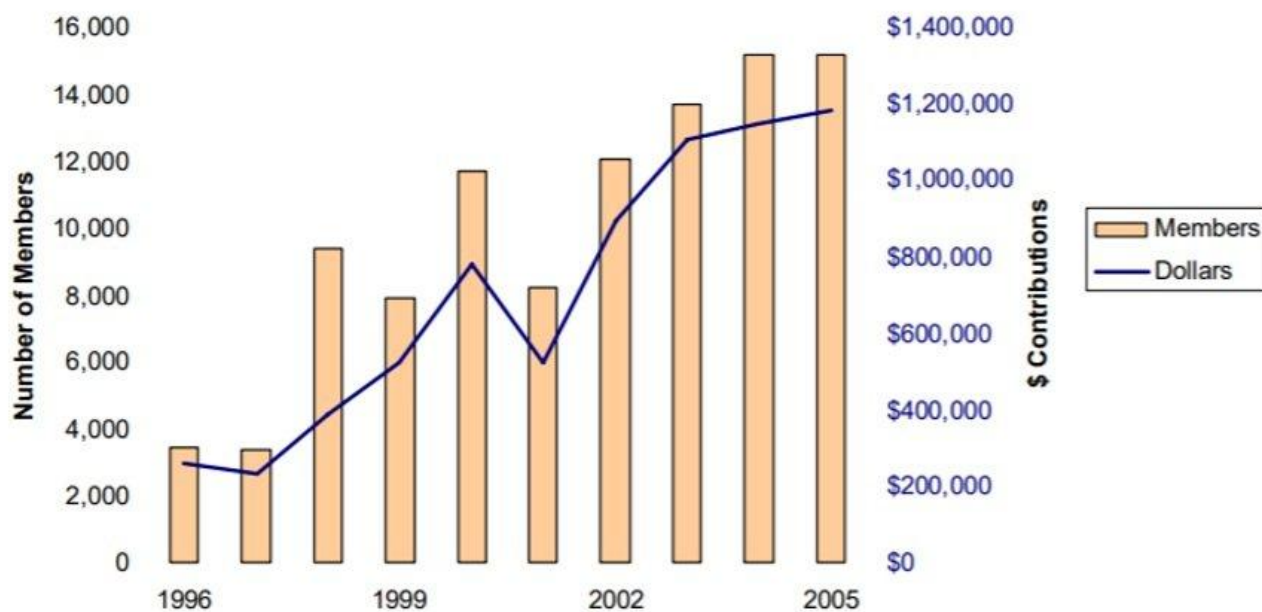
TAB 2: Station Growth

In the summer of 1997, prior to adding classical music broadcasts, the station had approximately 6,500 average-quarter-hour (AQH) listeners. By the fall of 2005, the AQH audience had reached 18,300—a gain of 180%.

Membership also grew. In June 1997, WRTI had 3,371 members; one year later, membership was 9,411. It continued to rise, reaching 15,000 by 2005. For the fiscal year 1997, the station received approximately \$259,000 in member contributions. In 1998, this amount increased to about \$390,000. Member contributions continued to rise almost every year, surpassing \$1,000,000 in 2003. In 2005, the station garnered \$1,200,000 from individual members. A decline in contributions and membership numbers in 1999 and 2001 reflected some strain from the station's rapid growth. To manage the expansion, the station hired a chief financial officer in 1999 and a membership director in 2001. Both members and contributions rose following these staff additions.

Attachment:

<TAB 3 – Membership & Contributions>



1. For each of the following, select **Supported** if it is a statement that can be reasonably inferred from the information in the tabs. Otherwise, select **Not supported**.

Supported	Not supported	Statements
		After the acquisition of WFLN's programming, WRTI allocated more time per week to classical music than to jazz.
		From 1997 through 2005, WFLN had a greater percent increase in its number of total listeners than in its number of total members.
		The average contribution per member was approximately the same for the 1997 fiscal year and the 2005 fiscal year.

2. For each of the following statements, select **Positive** if the information in the table accurately describes a variable that can be inferred from information in the tabs to have had a positive impact on WRTI membership or member contributions. Otherwise, select **No clear impact**.

Positive	No clear impact	
----------	-----------------	--

		An increase in average membership contributions
		Lack of direct competition
		Staff hires

3. Which of the following statements regarding WRTI from 1997 to 2005 is best supported by the information in tabs 2 and 3?

- a. Its share of the terrestrial radio market increased.
- b. Number of members has increased faster than total contributions for the period of those fiscal years.
- c. The range of annual average contributions per member was greater than the largest average contribution per member for any of those fiscal years.
- d. More total money was brought in contributions in years with more than \$1,000,000 in contributions than in years with fewer than \$1,000,000 in contributions.
- e. Only individuals were allowed to be members.

5.

Stainless steels are alloys of iron and carbon that also contain a minimum of 10.5% chromium and various amounts of other alloying materials, which may include molybdenum, manganese, and nickel, among others. Stainless steels are designated with three-digit SAE numbers generally ranging from the 200s to the 600s, sometimes followed by a single letter. The three most common categories of stainless steel are described below, and examples of seven specific varieties from within these three categories are listed in the tables that follow.

Ferritic steels contain 12.5%–17% chromium, less than 0.1% carbon, and up to 1% nickel. Ferritic steels are magnetic and can be strengthened by cold working but cannot be heat treated. They are commonly used in automotive exhaust systems, agricultural equipment, and high-heat applications such as furnaces and boilers.

Austenitic steels contain 16%–26% chromium, not more than 0.8% carbon, and 6%–15% nickel. They are nonmagnetic and are not heat treatable. Austenitic steels are the most common type of stainless steel globally, and they are commonly used in food-processing equipment, piping, and kitchen utensils.

Martensitic steels contain 10.5%–17% chromium, up to 1.2% carbon, and not more than 0.4% nickel. They are magnetic and heat treatable. Martensitic steels are commonly used in knives, cutting tools, and dental and surgical equipment.

Table 1

Table 2

1. Consider each of the following statements. Indicate Yes if the given information supports the statement. Otherwise, indicate No.

Yes	No	
		All of the listed stainless steels with a carbon content of 0.08% are Austenitic.
		A stainless steel among those listed with a Rockwell hardness of at least 85 must be either Austenitic or Ferritic.
		Of the steels listed, the average density of Austenitic steels is greater than the average density of Ferritic steels.

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2. Based on the information in the passage and tables, the stainless steel with the highest ratio of carbon to nickel has which of the following hardness ratings?

- (A)80
- (B)85
- (C)89
- (D)90
- (E) 95

MULTI-SOURCE REASONING

1

The table summarizes information in several categories about the 9 stores in a small grocery chain. The table also includes chain-wide averages where appropriate.

Attachment:

Sort By:

Select...

Store	Self-check express lanes	Self-check unlimited lanes	Pharmacy	Fuel	Restaurant	Average customer age
A	8	4	yes	no	no	34.50
B	8	6	no	no	no	28.40
C	6	4	yes	no	yes	32.00
D	8	0	yes	no	no	50.50
E	12	4	yes	yes	no	42.50
F	8	6	no	no	yes	34.60
G	8	0	no	yes	no	38.80
H	4	8	yes	no	yes	29.90
I	0	0	yes	yes	yes	56.70
averages	6.89	3.56	—	—	—	38.73

Tab.jpg [59.24 KiB | Viewed 12981 times]

For each of the following statements, select True if the statement can be verified to be true based on the information provided. Otherwise, select False.

True	False	Statements
		In each store whose average customer age falls between 34 and 36, the number of self-check express lanes is above average.
		There is a negative correlation between the number of self-check unlimited lanes and the average customer age.
		Stores in this table that have fewer self-check express lanes than the chain-wide average are less likely to have restaurants than stores that have more self-check express lanes than the chain-wide average.

Student	Paper 1	Quiz 1	Paper 2	Quiz 2	Final project
Jean	C	C	B	A	B
Linette	B	A	B	C	A
Mia	B	C	C	D	A
Phoebe	A	B	B	A	A
Robin	D	A	A	D	A
Sietske	B	B	C	C	A
Sigrid	B	C	C	B	B
Stanley	A	B	A	C	A
Vig	B	D	C	D	B
Yolette	D	C	C	A	A

Grades.JPG [31.84 KiB | Viewed 1852 times]

The table below shows a gradebook. Letter grades of A, B, C, and D represent numerical grades of 4, 3, 2, and 1, respectively. Each student's overall grade was determined by computing the average (arithmetic mean) of their grades on the first paper, the first quiz, the second paper, the second quiz, and the final project, and then rounding to the nearest whole number. If the average is exactly halfway between whole numbers, the grade will be rounded up.

For each of the following statements, select Yes if the statement is true based on the information presented in the table. Otherwise, select No.

Yes	No	
<input type="checkbox"/>	<input type="checkbox"/>	Each student who did not receive an A on the final project did not receive an A on either quiz.
<input type="checkbox"/>	<input type="checkbox"/>	Each student who did not receive an A on either quiz did not receive an A on the final project.
<input type="checkbox"/>	<input type="checkbox"/>	Each student who got an A on Paper 1 got an A in the course.

3

The table describes the incidence of nonfatal injuries in several industries. The data shown are from the US Occupational Safety and Health Administration, which collected the displayed statistics in 2009. The table includes the number of people (in thousands) employed in a number of industries, as well the number of injuries per hundred employees in those industries, broken down by the consequences of that injury for work. (NOTE: Because of rounding, components may not add to totals.)

Industry	Annual avg. employment (in thousands)	Total recorded cases	Total cases affecting work	Cases with days away from work	Cases with job transfer or restriction
Education and Health Services	18359.5	5	2.2	1.3	1
Financial Activities	7904.9	1.5	0.6	0.4	0.2
Information	2932.2	1.9	1	0.7	0.3
Leisure and Hospitality	13586.3	3.9	1.6	1	0.6
Local Government Construction	110.3	13	6.1	4.6	1.5
Local Government Education and Health Services	8720.4	5.1	1.7	1.1	0.5
Local Government Public Administration	4075.8	7.9	3.8	2.8	1
Local Government Trade, Transport, and Utilities	516	7	4.1	3	1.1
Manufacturing	12696.5	4.3	2.3	1	1.3
Natural Resources and Mining	1666.8	4	2.2	1.4	0.8
Other Private Sector Services	4607.1	3	1.4	1	0.5
Private Sector Construction	6700.5	4.3	2.3	1.6	0.7
Private Sector	25648.4	4.1	2.4	1.4	1

Industry	Annual avg. employment (in thousands)	Total recorded cases	Total cases affecting work	Cases with days away from work	Cases with job transfer or restriction
Trade, Transportation, and Utilities					
Professional and Business Services	17366.8	1.8	0.9	0.6	0.3
State Government Construction	81.8	5.1	2.7	2.4	0.4
State Government Education and Health Services	2624.7	4.7	2.3	1.6	0.7
State Government Public Administration	1991.9	4.3	2.2	1.9	0.3

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

For each of the following industries, indicate whether there is a 50 percent or greater chance that a given injury in 2009 resulted in days away from work, job transfer, or job restriction. Indicate yes if the chances were 50 percent or greater; otherwise, indicate no.

Yes	No	Statements
		The industry with the most employees among the industries that share the mode incidence of recorded injuries per hundred employees
		The industry with the fewest employees among the industries that share the median incidence of injury resulting in days away from work
		The industry with the median number of people employed

The table shows total sales and e-commerce sales, in millions of dollars, for U.S. retailers in a number of retail sectors in 2008 and 2009.

	2009 Sales (in millions of US dollars)	2009 Sales (in millions of US dollars)	2008 Sales (in millions of US dollars)	2008 Sales (in millions of US dollars)
Retail Sector	Total	E-commerce	Total	E-commerce
Building materials and garden equipment and supplies stores	268206	477	305085	575
Clothing and clothing accessories stores	204866	2965	216087	2547
Electronic shopping and mail-order houses	234667	112791	228545	108404
Electronics and appliance stores	98384	1140	108869	1120
Food and beverage stores	570581	883	571245	866
General merchandise stores	592009	220	596541	165
Health and personal care stores	253243	177	246976	160
Miscellaneous store retailers	105366	2360	113170	2347
Motor vehicles and parts dealers	676801	17201	788688	19337
Nonstore retailers	312470	116543	319567	112035
Sporting goods, hobby, book, and music stores	81373	1865	84323	1803
Total Retail Trade	3638471	145214	3952933	142281

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

Consider each of the following statements. For each statement, indicate whether the statement is "True" or "False," based on the information provided in the table.

True	False	Statements
------	-------	------------

		Of the retail sectors shown in the table, the percentage decline in overall sales between 2008 and 2009 was greater for the sector with the greatest 2008 total sales than for the sector with the least 2008 total sales.
		General merchandise stores saw their e-commerce sales rise as a percentage of their overall sales between 2008 and 2009.
		More than 50 percent of the increased sales from 2008 to 2009 for electronic shopping and mail-order houses was due to a rise in e-commerce sales.

5

The table contains data on 11 subway systems from around the world. For each subway system, the city and continent in which it is located is provided, along with the total number of lines and stations it contains. The length, measured in kilometers, of the average line in each system is also provided.

City	Continent	Lines	Average Line Length (km)	Stations
Buenos Aires, Argentina	South America	6	8.98	86
Toronto, Canada	North America	4	17.73	75
Santiago, Chile	South America	6	19.62	118
Beijing, China	Asia	20	28.6	306
Paris, France	Europe	16	13.74	302
Mexico City, Mexico	North America	12	16.76	163
Madrid, Spain	Europe	13	22.54	301
London, England	Europe	11	36.55	270
Chicago, USA	North America	8	20.75	145
New York, USA	North America	25	14.08	424
Singapore	Asia	5	39.84	119

Yes	No	
		The average (arithmetic mean) number of stations in the European subway systems is more than double the average (arithmetic mean) number of stations in the South American subway systems.
		The number of lines in the New York subway system exceeds the median number of lines by more

		than 13.
		The London subway system has the greatest total length as measured by kilometers of lines.

TABLE ANALYSIS

1

Coastline region	State	Country	Number of hurricanes	Percent change in population, 1960–2008
Gulf of Mexico	Florida	Monroe County	15	50.8
Gulf of Mexico	Louisiana	Lafourche Parish	14	67.2
Atlantic	North Carolina	Carteret County	14	104.3
Atlantic	North Carolina	Dare County	13	465.9
Atlantic	North Carolina	Hyde County	13	10.1
Gulf of Mexico	Louisiana	Jefferson Parish	12	108.9
Atlantic	Florida	Palm Beach County	12	454.7
Atlantic	Florida	Miami-Dade County	11	156.5
Gulf of Mexico	Louisiana	St. Bernard Parish	11	17.2
Gulf of Mexico	Louisiana	Cameron Parish	11	4.8
Gulf of Mexico	Louisiana	Terrebonne Parish	11	78.7

The table presents data on the 11 U.S. coastal counties that were hit by the most hurricanes between 1960 and 2008. It also lists the percent change in population for each county during the same time period. Positive percentages represent population growth.

Consider the following statements. For each statement, evaluate whether that statement is True or False, according to the information in the table.

True	False	
		The median number of hurricanes in the Florida counties was higher than the median number of hurricanes in each of the other states' counties.

		The counties listed in the table that experienced the three greatest percent changes in population during the period are all part of the coastline region whose listed counties had the greater range in number of hurricanes during the same period.
		The Gulf of Mexico coastline region experienced fewer hurricanes per county listed in the table, on average, than did the Atlantic coastline region.

2

Manager	Employee satisfaction rating (%)	Yearly sales (thousands of dollars)	Percent change in sales over previous year	Underground parking	Free shipping	Size of sales force
L. Jenkins	32.3	58.4	5.3	no	no	5
P. Parsons	44.4	92	−7.8	yes	yes	11
A. Yangzou	65.7	105.2	−1.2	no	yes	10
D. Xin	55.7	85.1	10.8	yes	yes	15
M. Stover	18	116.9	15.5	no	yes	12
Z. Szymes	50.1	64.7	4.8	no	no	8
T. Emerald	64.2	77.4	0.3	yes	no	11
O. McDonough	75.5	79.6	31.2	no	yes	8
K. Eriksson	46.9	58.9	−20.0	no	no	13
B. Striple	48.7	101.7	−9.4	yes	yes	16

A small furniture store chain conducted performance reviews of its 10 branch managers. The managers' performance in several metrics over the last year has been compiled in the table. The table also lists some relevant features of each manager's branch.

For each of the following statements, select True if the statement can be verified to be true based on the given information. Otherwise, select False.

True	False	
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		A majority of the managers who oversaw an increase in sales over the previous year have an employee satisfaction rating higher than the median.
		There is a positive correlation between the size of a branch's sales force and that branch's change in year-over-year sales.
		The branch that had the highest sales in the previous year has underground parking.

3

The Consumer Price Index (CPI) measures the average prices of goods and services purchased by consumers. In the United States, the CPI-U calculates the CPI for all urban consumers.

The CPI-U is calculated based on prices of food, clothing, shelter, fuels, transportation fares, charges for doctors' and dentists' services, drugs, and other goods and services that people buy for day-to-day living. All taxes directly associated with the purchase and use of items (such as, in the United States, sales taxes) are included in the index. An increase in CPI-U by a certain fractional amount means an increase by that fractional amount in overall prices within the relevant category.

For analyzing general price trends in the economy, seasonally adjusted prices are usually preferred over unadjusted prices because adjusting eliminates the effect of changes that normally occur at the same time and in about the same magnitude every year—such as price movements resulting from climatic conditions, production cycles, model changeovers, and holidays.

Attachment:

Percent Changes in CPI for All Urban Consumers (CPI-U), US City Average

Category	Seasonally adjusted changes from preceding month							Unadjusted 12 months ended Sep 2010
	Mar 2010	Apr 2010	May 2010	Jun 2010	Jul 2010	Aug 2010	Sep 2010	
All items	0.1	-0.1	-0.2	-0.1	0.3	0.3	0.1	1.1
Food (all)	0.2	0.2	0	0	-0.1	0.2	0.3	1.4
Food (at home)	0.5	0.2	0	-0.1	-0.1	0	0.3	1.4
Food (away from home)	0	0.1	0.1	0.1	0	0.3	0.3	1.4
Energy (all)	0	-1.4	-2.9	-2.9	2.6	2.3	0.7	3.8
Gasoline (all types)	-0.8	-2.4	-5.2	-4.5	4.6	3.9	1.6	5.1
Fuel oil	0.7	2.3	-1.4	-3.2	-1.6	0.9	0.8	11.8
Energy services	1.4	-0.5	-0.5	-1.6	0.8	0.4	-0.8	1.5
Electricity	2.1	0.7	-0.4	-2.2	0.5	0.2	-0.3	1.1
All items less food and energy	0	0	0.1	0.2	0.1	0	0	0.8
New vehicles	0.1	0	0.1	0.1	0.1	0.3	0.1	2.1
Used cars and trucks	0.5	0.2	0.6	0.9	0.8	0.7	-0.7	12.9
Apparel	-0.4	-0.7	0.2	0.8	0.6	-0.1	-0.6	-1.2
Services less energy services (all)	0.1	0.2	0.1	0.1	0.1	0	0.1	0.8
Shelter	-0.1	0	0.1	0.1	0.1	0	0	-0.4
Transportation services	0.4	0.4	0.4	0	0	0.1	0.3	3.0
Medical care services	0.3	0.3	0	0.4	0	0.2	0.8	3.7

1. For each of the following, select Yes if the statement is inferable from the given information. Otherwise select No.

Yes	No	
		The changes in seasonally adjusted prices for used cars and trucks between March 2010 and September 2010 were in most cases less in magnitude than the changes in seasonally adjusted prices of new vehicles for the same period.
		The seasonally adjusted CPI-U for all items was higher in March 2010 than in the previous month.
		The seasonally unadjusted change in the price of new vehicles in August 2010 over the previous month was about the same as the seasonally unadjusted change in the price of food away from home over the same period.

4

Household Size: Occupied Housing Units by State, 2010 Census

	1-person households	2-person households	3-person households	4-person households	5-person households	6-person households	7 or more person households	Total households
Connecticut	373648	443095	226658	197116	84916	29348	16306	1371087
Maine	159533	213695	84340	64010	23840	7854	3947	557219
Massachusetts	732263	813166	417216	353676	150842	51409	28503	2547075
New Hampshire	133057	188923	85046	70835	27365	9286	4461	518973
Vermont	72233	96889	39695	31210	11107	3480	1828	256442

The above data are drawn from 2010 census data for New England (excluding Rhode Island, whose data is not available). The table provides the total number of households in each state and the distribution of households of various sizes within each state.

Consider the following statements about these states. For each statement, evaluate whether that statement is True or False, according to the information in the table.

True	False	
		The median household size of all households in the five states combined is two people.
		Of the seven categories of household size, Maine has the median number of households in exactly three.
		In each of the seven categories of household size, Massachusetts has more households than the next highest two states combined.

5

The table summarizes total sales information for a large production company for the first six months of 2014. The table also provides percent of total sales from the company's only three divisions (Electronics, Housewares, and Automotive). The company acquired the automotive division in March of that year.

Attachment:

2014 Monthly Sales by Product Line

Month	Total (\$, thousands)	% Electronics	% Housewares	% Automoti
January	3,890	47.09	52.91	0.00
February	4,204	49.75	50.25	0.00
March	6,561	34.19	33.00	32.81
April	6,982	36.44	34.03	29.53
May	6,613	37.97	33.34	28.69
June	7,028	34.58	34.00	31.42

For each of the following statements, select **Would help explain** if the statement 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	
		Consumer purchases of electronics typically drop just after the month of December, but they revive within two to three months.
		Companies that have electronics, housewares, and automotive product lines tend to have higher total sales in housewares than do companies that sell only one or two of these product lines.
		The housewares division took a \$1.1 million loss in March due to an accounting change.

TWO PART ANALYSIS

1

At University X, there are 146 students who are taking economics and 97 students who are taking history.

In the table below, pick two numbers that are consistent with the information that is given. In the first column, select the row that shows the number of students at University X who are taking at least one of economics and history, and in the second column, select the row that shows the number of students at University X who are taking both economics and history.

Taking at least one of economics and history	Taking both economics and history	Possible answers
		78
		83
		104
		154
		160
		164

2

Roger and Kelly are going on a road trip. If Roger drives at his normal rate of speed for the first 4 hours, then Kelly can drive the remaining distance in 4 more hours. If, however, Roger drives 75% faster than normal for 4 hours, Kelly can drive the remaining distance at her regular rate of speed in 2 hours.

In the table below, choose a normal rate of speed for Roger and a normal rate of speed for Kelly that are consistent with the information above.

Roger	No	
		50 miles/hour
		55 miles/hour
		60 miles/hour
		65 miles/hour

		70 miles/hour
		75 miles/hour

3

$x > y^{x > y}$

$(3^x)(9^{42y})(81^{5x}) = (81^{525})(27^{21y})(3^x)(9^{42y})(81^{5x}) = (81^{525})(27^{21y})$

In the table, select x and y such that the values are consistent with the information that is given. Make only two selections, one in each column.

x	y	
		27
		34
		41
		53
		64
		73

4

Automotive Marketing Consultant: Small hybrid vehicles, while very fuel efficient and suitable for long and frequent commutes, often do not have powerful performance and handling. On the other hand, premium luxury cars burn more fuel but offer superior handling, performance and a thrilling driving experience. We should therefore be able to make a prediction about the preferences of individual car buyers based on their car-buying patterns.

The consultant suggests that predictions about individuals can be made based upon patterns of those individuals. Indicate in the table below, the possible prediction and pattern that most strongly conform to the Consultant's statement above. Make only two selections, one in each column.

Prediction	Pattern	
		The individual buys luxury cars.
		The individual does not commute to work.

		The individual buys small hybrid vehicles.
		The individual values fuel economy.
		The individual is more wealthy than the average person.

5

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