GMAT IR PRACTICE PAPER

MULTI-SOURCE REASONING

1.

Email from CEO to store manager
April 10, 2:53 a.m.

I just got a call from the police. Our store on Thompson street was robbed again. This is the third time in exactly seven months. After the first robbery, you said you would heighten security, but the measures you took had no effect; 60 days later the same store was robbed. Then you said you'd install an alarm system, but I guess you never got around to that. After the second robbery, the insurance company threatened to cancel our account if the store was robbed again and we hadn't done anything to increase the security of the premises. What am I supposed to tell them?

Email #2

Email from store manager in response to the CEO's April 10, 2:53 a.m. text
April 10, 3:38 a.m.

I had an alarm system installed within a week after the second robbery. It took the police exactly four minutes to get to the store after the alarm was triggered; the robber was in and out in three. The alarm company called me after calling the police, and I still beat the police to the scene. I've told the alarm company to call me first next time—I missed the robber by no more than 30 seconds.

You can tell the insurance company that the measures I undertook after the first robbery did have a major impact. We started moving inventory from the shelves to the back room before closing the store each day. This cut our losses in the second robbery by nearly 70 percent as compared to the first robbery. I've attached the exact numbers for your perusal. After the second robbery, we began leaving even less inventory on the shelves. It's too soon to tell exactly how much money we lost in this morning's robbery, but my survey indicates that the losses are about another 40 percent smaller than those of the second robbery.

Email #3

Attachment to the store manager's April 10, 3:38 a.m. email

Value of Stolen Inventory

1. If the manager's estimates are correct and if the tripods stolen in the third robbery account for 15 percent of the value of the stolen inventory, then the value of the stolen tripods is closest to

A. $800
B. $1,100

C. $1,600
D. $2,100
E. $4,800

2. For each of the following statements, select True if the statement can be verified to be true assuming that the information in the emails (but not necessarily the attachment) is accurate. Otherwise, select False.

True	False	
		An alarm system was installed at the store in November.
		Upon being reached by phone, the store manager can make it to the store in under five minutes.
		The attachment contradicts the store manager.

2.

Information for Campers and Parents

North Lake Summer Camp offers weekly sessions for day campers. Campers must be dropped off by 7:50am and picked up at 5pm each day (except on Wednesdays when parents must arrive at 3:30pm). Cost is $850 for the week and includes lunch and a snack. On Tuesdays all campers embark on a full-day hiking trip outside of the camp and on Thursdays all campers embark on a full-day canoeing trip on one of the neighboring lakes and rivers. On the other days, each camper must choose and attend an activity from each type—Waterfront Activities, Team Sports, Camping Activities, and Arts and Crafts—for all of the sessions as shown in the schedule. For "Camper's Choice" the camper can choose any of the different activities. On Mondays, the camp session ends with "Campfire Council" and all visitors are welcome to attend. On Wednesday, the camp session ends with meetings between counselors and parents.

Tab 2: Activities

List of Activities at North Lake Summer Camp

The following list shows the different activities available to campers in each category. The number beside each activity shows the maximum number of campers that can be in one session for that activity.

Attachment:

Waterfront Activities	Camping Activities
Swimming(40)	Fire Building (25)
Canoeing (30)	Shelter Building (30)
Sailing (15)	Orienteering (25)

Team Sports	Arts and Crafts
Basketball (20)	Drawing/Painting (30)
Soccer (20)	Pottery (30)
Tennis (15)	Basket Making (25)
Flag Football (30)	

13.jpg [65.31 KiB | Viewed 295 times]

Tab 3: Weekly Schedule

Weekly Schedule for Day Campers at North Lake Summer Camp

Attachment:

Weekly Schedule for Day Campers at North Lake Summer Camp

Time	Monday	Tuesday	Wednesday	Thursday	Friday
8am	Waterfront Activity	Hiking Outing (all day)	Team Sport	Canoeing Outing (all day)	Waterfr Activity
9:30am	Arts and Crafts		Camper's Choice		Arts and Crafts
11am	Team Sport		Arts and Crafts		Team Sport
12pm	Lunch		Lunch		Lunch
1pm	Camper's Choice		Team Sport		Camper Choice
2pm	Camping Activity		Waterfront Activity		Campin Activity
3pm	Snack		Snack	\	Snack
3:30pm	Campfire Council		Parent/Counselor Meeting		Camper Choice

1. Which of the following is the maximum number of permutations possible for the different schedules that a camper could create for any day spent on the camp premises (Monday, Wednesday, and Friday)?

A. 848

B. 1,404

C. 7,488

D. 18,252

E. 42,866

2. On Wednesday, 60 campers attended North Lake Summer Camp. For each of the following statements, mark Supported if the statement is supported by the information provided. Otherwise select Not Supported.

Supported	Not Supported	Statements
		At least one of the campers participated in Orienteering on Wednesday.
		At least one of the campers participated in Canoeing on Wednesday.
		At least one of the campers participated in Basket Making on Wednesday.

3. On one of the days spent at camp (Monday, Wednesday, and Friday), a certain camper spends one of his activity sessions participating in Swimming. For each activity listed below, select "Possible" if the camper could have done this activity immediately after Swimming and mark "Not Possible" if the camper could not have done this activity immediately after Swimming.

Possible	Not Possible	
		Shelter Building
		Sailing
		Basketball

3.

Email #1

Email from project manager to financial officer
August 3, 9:43 a.m.

Did all three bids arrive on time last night? We need to minimize delays on construction, so if the contractors have submitted their estimates and our research team has compiled reports on the contractors' histories, we should make a decision on which firm to hire by the end of the day.

Email #2

Email from financial officer in response to the project manager's August 3, 9:43 a.m. email
August 3, 10:12 a.m.

Appaloosa Construction sent us a bid of $1.35 million. Its bid is the highest of the three, but its track record is spotless; none of the past 10 major projects it has worked on has gone over budget by more than 4 percent. Breton Construction did manage to underbid them—its representative claims that it can do the project for $1.25 million. However, in the past two years, Breton oversaw two different projects that went over budget by a full 25 percent. If our project were to exceed Breton's estimate by a comparable percentage, we would run out of funds before completion. Finally, Campolina Construction presented a $1.1 million plan, and its track

record is as good as Appaloosa's. Unfortunately, although Appaloosa and Breton can both start tomorrow, Campolina would be unable to begin work until August 25, so we cannot accept Campolina's low bid.

Email #1

Email from project manager in response to the financial officer's August 3, 10:12 a.m. email
August 3, 10:38 a.m.

Even though Breton's work could potentially cost less than either of the other two, that savings does not justify the risk of being unable to complete the project. But as far as Campolina is concerned, you're not considering the actual cost of a delay. It's true that we are losing money at a constant rate each day we don't start building. But even after factoring in the losses of waiting until August 25, the estimated cost of working with Campolina still ends up $50,000 below Appaloosa's bid.

1. Consider each of the following statements. Does the information in the three emails support the inferences as stated? Choose Yes if the statement can be accurately inferred; otherwise, choose No.

Yes	No	
		In making their decision, the project manager and the financial officer considered how much time the contractors would spend on construction.
		The project manager and the financial officer disagree about the best choice of contractors for completing the project.
		The project manager is willing to wait a few days before deciding on Campolina's bid.

2. The amount of money lost each day that construction is delayed is closest to

A. $2,500
B. $10,000
C. $20,000
D. $55,000
E. $65,000

American pets

78.4 million dogs and 86.4 million cats are owned as pets in the U.S. Though some pets come from breeders, many others are adopted from shelters and pounds. Even though 78 percent of pet dogs and 88 percent of pet cats are spayed or neutered, there has never been a shortage of animals available for adoption. The result of these staggering numbers of animals is a booming industry of pet supplies, services, and medical care.

Table #1

Tables 1 and 2, respectively, indicate the average one-time adoption costs and average annual expenses associated with pet ownership. However, dogs vary significantly in size; small dogs such as chihuahuas cost on average 25 percent less than the values shown in the adoption and ownership cost tables, while larger canines such as mastiffs often cost 50 percent more.

Average Per-Animal Adoption Expenses in America

Table #2

Average Per-Animal Annual Ownership Expenses in America

1. Consider each of the following statements. Does the information in the passage and tables support the inference as stated? Choose Yes if the statement can be accurately inferred; otherwise choose No.

Yes	No	
		Americans spend over $10 billion annually on toys and treats for their cats and dogs.
		The average cost of adopting an average small dog and keeping it for a year is less than the cost of doing so for an average cat.
		The number of categories of expenses unique to cats is the same as the number of categories unique to dogs.

2. Based on the information in the passage and tables, the total cost of spaying or neutering all unspayed and non-neutered pet cats and dogs in America would be closest to

A. $2.5 billion
B. $4.0 billion
C. $12 billion
D. $14.5 billion
E. $27.5 billion

4.

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E. $65,000

5.

Goals

A small British retail store has the following 6 monthly goals (Goals 1-6).

1. The median number of transactions for the cashiers should be greater than 2,000.
2. The arithmetic mean number of transactions for the cashiers should be greater than 2,000.
3. Each cashier should have a minimum of 1,800 transactions.
4. The median value of the transactions for the cashiers should be greater than 10 pounds sterling (£).
5. The arithmetic mean value of the transactions for each cashier should be greater than £10.
6. The arithmetic mean value of all the transactions should be greater than £10.

Cashiers

For the three months shown in the table, the retail store had exactly 7 cashiers. The table shows the number of transactions for each cashier in these three months and the total number of transactions in those months.

Attachment:

Cashier	Transactions for Month 1	Transactions for Month 2	Transactions for Month 3
1	2,145	1,781	2,189
2	2,138	2,035	1,931
3	2,097	2,045	1,862
4	2,041	1,856	1,862
5	2,041	1,789	1,790
6	1,994	2,045	1,981
7	1,786	1,744	1,970
Total	14,242	13,295	13,585

Value

For each of Months 1-3, the table shows the total value of all transactions for that month.

Attachment:

Period	Value of transactions
Month 1	£159,937.66
Month 2	£127,100.20
Month 3	£165,193.60

1. For each of the following cashiers, select Yes if the information provided indicates that the cashier had a greater number of transactions than the amount indicated in Goal 3 for each of Months 1, 2, and 3. Otherwise, select No.

Yes	No	
		Cashier 5
		Cashier 6
		Cashier 7

2. For each of the following values, select Yes if the information provided indicates that the value was greater for Month 1 than for Month 3. Otherwise, select No.

Yes	No	
		The total number of transactions for the month
		The total value of all transactions for the month
		The arithmetic mean value of all the transactions for the month

3. Consider the following incomplete statement:

If Goal _____ is met next month, then Goal 6 will also be met next month.

Which one of the following would complete the statement such that it must be the case based on the information provided?

A. 1
B. 2
C. 3
D. 4
E. 5

GRAPHICS REPRESENTATION

1.

In a two-player game, the players move their pieces on a board that is marked off in squares, 5 squares wide and 5 squares deep. The five rows are labeled 1 to 5, and the five columns are labeled A to E. Each square is identified by its row number and column letter (for example, 3C). At the beginning of the game, one player's piece is placed on any of the four corner squares of the board, and the other player's piece is placed in the opposite corner. Players then take turns moving their pieces one square at a time, either horizontally, vertically, or diagonally. The game ends when a player wins by placing his or her piece on the square opposite its starting position. Players may not move their pieces so that they occupy a square adjacent to the opponent's piece, either horizontally, vertically, or diagonally. Abe and Bea are playing the game, and Abe made the first move by placing his piece on 2B.

Select the square to which Bea should move her piece to most restrict Abe's choices for where to move his piece on his next turn. Also, assuming that later during the same game, Abe's piece is on 3E and Bea's piece is on 4C, select the square to which Bea should move her piece to ensure that each player has at least three more moves before the game is over. Make only two selections, one in each column.

First move	Later move	
		3B
		3C
		4D
		5C

		5D

2.

The chart shows the breakdown of the world's population of people age 100 or older. Each portion represents the percentage of those people who live on a particular continent.

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

There are approximately_____as many people age 100 or older in Asia and Europe combined than in South America.

4	times
7	times
11	times

If there are 18,600 people aged 100 or older living in South America, then there are approximately_____people aged 100 or older living in North America.

A.	4,600
B.	36,700
C.	73,300

D. 150,100

3.

The flowchart represents a computer algorithm that takes two positive integers as the input and is intended to return two integers as the output. Each process is symbolized by an equation, such as a = a – 1. In this particular process, 1 is subtracted from the current value of the variable a, and the difference then becomes the value of a. For example, if the value of a is 5 before the process a = a – 1 is completed, then the value of a will be 4 after the process is completed. Algorithms that are incorrectly formed may sometimes get stuck in an infinite loop. An infinite loop is a sequence of instructions that never terminates.

Complete the following statements by making selections from the drop-down menus in accordance with the algorithm represented by the flowchart.

If 58 and 11 are entered as the values for a and b, respectively, then one of the outputs of the function will be _____.

A. D = 0

B. D = 4
C. D = 55
D. R = 3
E. R = 4

The algorithm will get stuck in an infinite loop

A. if a > b
B. if a = b
C. if a < b
D. never

4.

The line graph to the left shows the 1985–2005 tax revenues of France and the United Kingdom (UK) as a proportion of those countries' gross domestic products (GDP) in comparison to aggregate statistics from the member nations of the Organization for Economic Cooperation and Development (OECD) and the 15 members of the European Union (EU) prior to the EU's 2004 expansion (the EU-15).

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

_____of the two individual countries shown in the graph received a higher proportion of their respective GDPs as tax revenues in 2005 than in 1985.

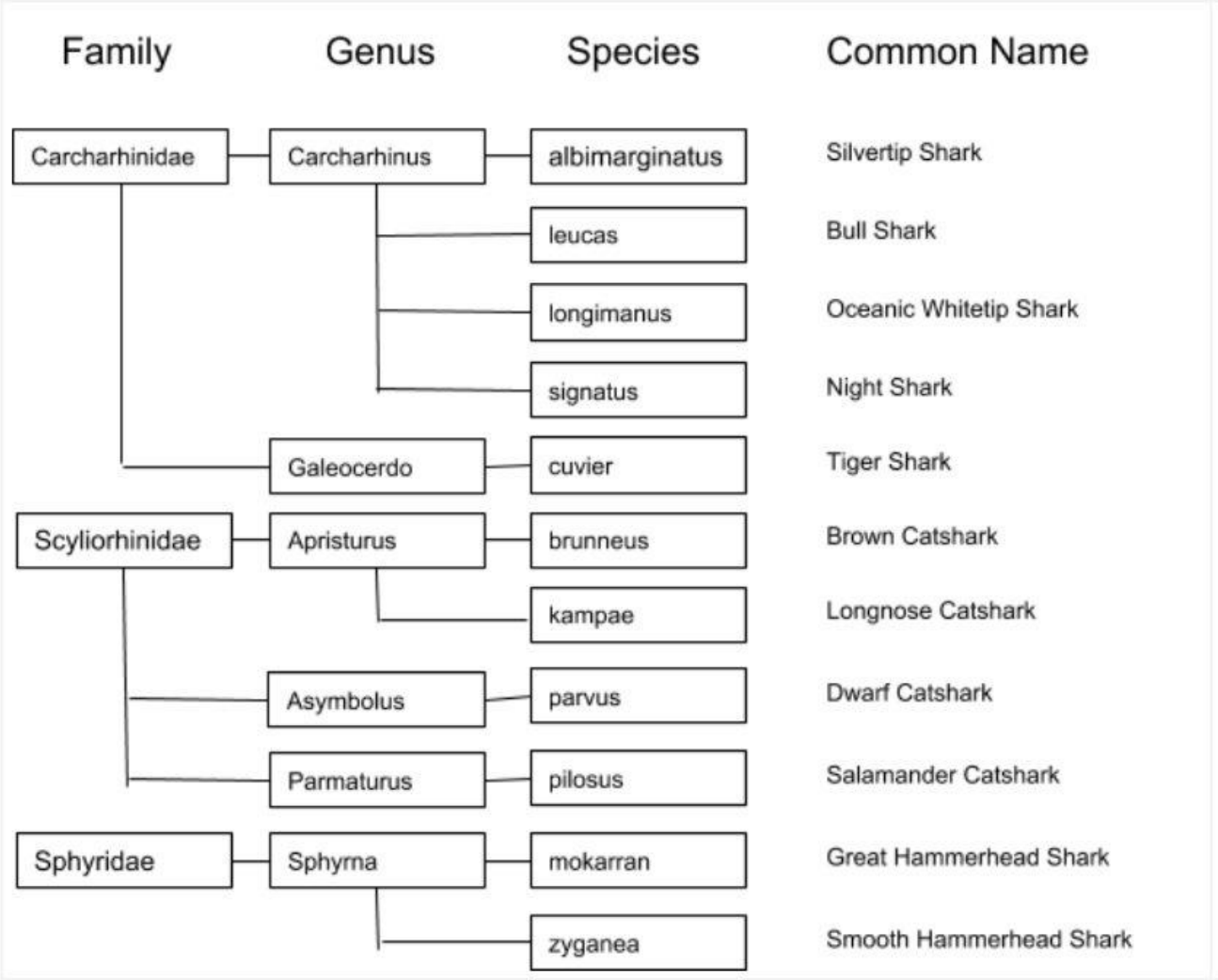
A.	Neither
B.	One
C.	Both

The ratio of 1995 tax revenue as a percent of GDP to 1990 tax revenue as a percent of GDP was largest in_____

A.	the	EU-15
B.	the	OECD
C.		France

D. the UK.

5.



The diagram lists the taxonomic family, genus, and species classification for all of the sharks discussed in a documentary on ground sharks.

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 number of species included in the documentary from the genus *Apristurus* is equal to the number of_____ included.

A. families
B. genuses from the family Scyliorhinidae
C. species from the genus Asymbolus
D. species from the family Sphyridae

The number of families with exactly one genus included in the documentary is_____.

A. Zero
B. One
C. Two
D. Three

TWO-PART ANALYSIS

1

Total Fall Enrollment in Private Degree-Granting Institutions: 2008

Attachment:

		Undergraduate				Postbaccalaureate		
	Total	4-year		2-year		Total	Not-for-profit	For-profit
		Not-for-profit	For-profit	Not-for-profit	For-profit			
Alabama	58,558	23,229	34,000	0	1,329	7,343	4,128	3,215
Arizona	291,869	3,539	275,530	0	12,800	81,066	4,507	76,559
California	264,775	136,304	76,356	2,375	49,740	147,979	129,522	18,457
Colorado	69,460	18,375	40,733	165	10,187	20,507	13,586	6,921
District of Columbia	71,465	37,967	33,498	0	0	49,061	36,575	12,486
Florida	206,477	106,089	79,732	152	20,504	56,629	48,067	8,562
Georgia	76,356	47,701	23,670	1,057	3,928	23,757	17,940	5,817
Illinois	200,263	134,075	56,676	1,126	8,386	98,568	86,235	12,333
Indiana	88,896	68,677	13,020	495	6,704	16,110	15,652	458
Iowa	113,385	45,397	67,601	151	236	16,487	10,919	5,568
Massachusetts	173,897	166,873	2,800	1,737	2,487	97,339	97,203	136
Michigan	101,252	93,562	4,649	0	3,041	23,507	22,870	637
Minnesota	78,855	50,793	25,723	106	2,233	75,567	21,232	54,335
Missouri	117,735	95,299	12,510	2,275	7,651	49,937	49,298	639
New York	390,435	341,205	24,241	6,575	18,414	168,531	166,449	2,082
North Carolina	75,228	68,524	4,635	572	1,497	18,773	18,039	734
Ohio	146,395	107,277	7,044	1,272	30,802	31,669	30,621	1,048
Pennsylvania	251,369	195,359	17,783	7,492	30,735	83,943	83,372	571
Tennessee	75,283	54,023	8,373	278	12,609	18,187	17,097	1,090
Texas	127,359	92,495	12,935	867	21,062	36,657	33,996	2,661
Virginia	90,439	59,959	24,416	0	6,064	27,236	24,789	2,447

The table above gives the 2008 enrollment in private degree-granting institutions for the 20 states with the highest total enrollment, as well as for the District of Columbia. These statistics do not include state-funded and federally funded public institutions. The data include both for-profit and not for-profit institutions; enrollment for both of these categories is provided in addition to the total enrollment.

Consider the following statements about enrollment in the 21 states (including the District of Columbia) shown in the table. For each statement, indicate whether the statement is True or False, based on the information provided in the table.

True	False	
		The state with the largest number of students enrolled in for-profit fouryear undergraduate programs has the smallest number of students enrolled in not-for-profit four-year undergraduate programs.
		The state with the median number of students enrolled in not-for-profit four-year undergraduate programs also has the median number of students enrolled in not-for-profit two-year undergraduate programs.
		More than half of the students enrolled in degree-granting programs in Minnesota attend for-profit schools.

2

Loan X has a principal of $10,000x and a yearly simple interest rate of 4%. Loan Y has a principal of $10,000y and a yearly simple interest rate of 8%. Loans X and Y will be consolidated to form Loan Z with a principal of $(10,000x + 10,000y) and a yearly simple interest rate of r%, where r = (4x+8y)/(x+y). In the table, select a value for x and a value for y corresponding to a yearly simple interest rate of 5% for the consolidated loan. Make only two selections, one in each column.

	X	Y	Value
(A)			21
(B)			32
(C)			51
(D)			64
(E)			81
(F)			96

3

The table lists for each of 25 countries (A–Y) the ranking the country had in 2005 and the ranking it had in 2012 based on the number of personal computers sold per 100 people in the country in those years. For example, the greatest number of personal computers sold per 100 people was in Country V in 2005 and in Country D in 2012. Country A lost five places in the rankings from 2005 to 2012 in going from a ranking of 6 in 2005 to a ranking of 11 in 2012, whereas Country H gained 4 places in the rankings in going from a ranking of 14 in 2005 to a ranking of 10 in 2012. None of the 25 countries had the same ranking in 2012 as in 2005.

Country	Ranking 2005	Ranking 2012
A	6	11

Country	Ranking 2005	Ranking 2012
B	11	12
C	20	39
D	5	1
E	8	9
F	22	42
G	24	20
H	14	10
I	17	8
J	13	16
K	23	13
L	21	19
M	4	36
N	18	21
O	9	17
P	7	2
Q	25	23
R	16	15
S	10	14
T	19	22
U	3	5
V	1	3
W	15	7
X	12	4
Y	2	6

For each of the following countries, select Gained if that country gained at least one place in the rankings from 2005 to 2012. Otherwise, select Lost.

Gained	Lost	
		Country K
		Country L
		Country M

4

The table shows the dollar value in millions for select Brazilian exports by agricultural product group for six years from 2006 through 2011.

Attachment:

Product	2006	2007	2008	2009	2010
Beef	3,890	4,354	5,081	3,890	4,564
Coffee	2,953	3,405	4,168	3,791	5,204
Corn	482	1,919	1,405	1,302	2,216
Dairy	139	274	510	148	132
Eggs	30	53	95	86	115
Live animals	89	285	418	471	697
Nuts	247	294	289	304	3,307
Pork	1,022	1,209	1,448	1,204	1,321
Poultry	3,472	5,019	6,921	5,700	6,691
Processed meats	71	105	152	142	151
Rice	60	53	312	268	163
Sugar	6,167	5,101	5,483	8,378	12,762
Wheat	64	30	204	63	227

12345.jpg [146.67 KiB | Viewed 1016 times]

For each of the following statements, select True if the information in the table accurately supports the statement. Otherwise, select Not true.

True	Not True	Statements
		The product with the greatest annual percent increase for the six years listed is also the product with the greatest total percent increase for the duration of the six years.
		For the entire six-year period listed, the percent increase in dollar value for non-animal products listed is more than double that of the animal products listed.
		If the dollar value for sugar exports remained flat for each of the five years after 2011 and all other products listed experienced their respective average percent change on a yearly basis for the same five years, then the dollar value of exactly two product categories of exports would surpass the dollar value of sugar exports by 2016.

5

Day	Activities intended to reduce symptoms		
	Drank hot tea	Took Allergy Pill X	Used nasal irrigation device
1	yes	no	yes
2	yes	no	no
3	yes	no	yes
4	yes	yes	no
5	no	yes	yes
6	no	yes	yes
7	no	no	no

10.jpg [88.1 KiB | Viewed 302 times]

A physician has instructed a patient with a strong allergic reaction to mold to record the relationship between his activities and the severity of his allergy symptoms experienced through the night for a period of one week. Each day, within three hours of going to sleep, the patient would perform activities intended to reduce the severity of his allergy symptoms. For each day, the table indicates whether the patient drank hot tea, took Allergy Pill X, used a nasal irrigation device, or slept with the window open. The table also indicates the severity of his allergy symptoms.

For each statement, select Yes if it is consistent with the information given. Otherwise, select No.

Yes	No	
		The patient never experienced severe allergy symptoms when he took Allergy Pill X.
		The patient experienced mild allergy symptoms whenever he slept with the window open.
		The patient experienced only mild symptoms whenever he drank hot tea and used a nasal irrigation device.

TABLE ANALYSIS

1

The table lists data on the 22 earthquakes of magnitude 7 or greater on the Richter Scale during a recent year. Times are given in hours, minutes, and seconds on the 24-hour Greenwich Mean Time (GMT) clock and correspond to standard time at Greenwich, United Kingdom (UK). Latitude, measured in degrees, is 0 at the equator, increases from 0 to 90 proceeding northward to the North Pole, and decreases from 0 to -90 proceeding southward to the South Pole. Longitude, also measured in degrees, is 0 at Greenwich, UK, increases from 0 to 180 from west to east in the Eastern Hemisphere, and decreases from 0 to -180 from east to west in the Western Hemisphere.

Attachment:

Date (month/day)	Time (GMT)	Magnitude	Depth (km)	Latitude	Longitude
01/03	22:36:28	7.1	25	-8.799	157.346
01/12	21:53:10	7.0	13	18.443	-72.571
02/26	20:31:27	7.0	25	25.930	128.425
02/27	06:34:12	8.8	23	-36.122	-72.898
04/04	22:40:43	7.2	4	32.297	-115.278
04/06	22:15:02	7.8	31	2.383	97.048
05/09	05:59:42	7.2	38	3.748	96.018
05/27	17:14:47	7.1	31	-13.698	166.643
06/12	19:26:50	7.5	35	7.881	91.936
06/16	03:16:28	7.0	18	-2.174	136.543
07/18	13:34:59	7.3	35	-5.931	150.590
07/23	22:08:11	7.3	607	6.718	123.409
07/23	22:51:12	7.6	586	6.486	123.467
07/23	23:15:10	7.4	641	6.776	123.259
08/04	22:01:44	7.0	44	-5.746	150.765
08/10	05:23:45	7.3	25	-17.541	168.069
08/12	11:54:16	7.1	207	-1.266	-77.306
09/03	16:35:48	7.0	12	-43.522	171.830
09/29	17:11:26	7.0	26	-4.963	133.760
10/25	14:42:22	7.8	20	-3.487	100.082
12/21	17:19:41	7.4	14	26.901	143.698
12/25	13:16:37	7.3	16	-19.702	167.947

For each of the following statements, select Yes if the statement is true based on the information provided; otherwise, select No.

Yes	No	Statements
		For the 22 earthquakes, the arithmetic mean of the depths is greater than the median of the depths.
		More than half of the 22 earthquakes occurred north of the equator.
		Exactly half of the earthquakes listed occurred between 10:00:00 and 20:00:00 GMT.

2

The table displays nutrition data per 240 mL serving for selected cooked or uncooked vegetables: percent water, energy in kilocalories (kcal), protein, total fat, carbohydrate, and total fiber, in grams (g). Each serving consists of 240 mL of finely chopped, raw vegetables (uncooked) or 240 mL of thoroughly drained, steamed vegetables (cooked).

Attachment:

Vegetable	Cooked (yes/no)	Percent water	Energy (kcal)	Prot
Asparagus	yes	92	43	
Beets	yes	87	75	
Broccoli	yes	91	44	
Broccoli	no	91	25	
Carrots	yes	87	70	
Carrots	no	88	47	
Corn	yes	77	131	
Green beans	yes	89	44	
Mustard greens	yes	94	21	
Pak choi	yes	96	20	
Spinach	yes	91	41	
Spinach	no	92	7	
Summer squash	yes	94	36	
Summer squash	no	94	23	
Sweet green pepper	no	92	40	

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For each of the following statements, select Yes if the statement is true based on the information provided; otherwise, select No.

Yes	No	Statements
		The median amount of protein for all uncooked vegetables listed is 13 the median amount of protein for all cooked vegetables listed.
		The amount of carbohydrate per serving of cooked corn is exactly 3 times the median amount of carbohydrate per serving for the other 14 vegetable options listed.
		Each serving listed for which total fiber is less than 3.0 g also has at most 10 g of carbohydrate.

3

The table lists minimum temperature, maximum temperature, and weather conditions reported in 30 cities on 6 continents on February 19, 2011.

City	Continent	Minimum temperature (°C)	Maximum temperature (°C)	Weather conditions
At	North America	11	21	cloudy
Au	Oceania	18	25	cloudy
Ba	Asia	26	34	cloudy
Be	Asia	–3	10	fine
Ber	Europe	–4	–1	cloudy
Bue	South America	20	29	rain
Cai	Africa	14	24	fine
Chi	North America	–4	3	cloudy
Dub	Europe	5	11	bright
Fra	Europe	1	7	cloudy
Hou	North America	16	24	cloudy
Joh	Africa	16	26	thunderstorms
Kua	Asia	24	33	rain
Lon	Europe	5	10	rain
Los	North America	10	15	showers
Mad	Europe	5	12	rain
Man	Asia	22	32	thunderstorms
Mex	North America	7	25	fine
Mon	North America	–6	–4	bright
Mum	Asia	21	30	fine
New	North America	2	3	snow
Par	Europe	5	7	rain
Rio	South America	21	38	cloudy
San	South America	11	29	fine
Seo	Asia	–3	9	cloudy
Syd	Oceania	25	29	showers
Teh	Asia	3	11	haze
Tok	Asia	3	9	fine
Tor	North America	–6	–2	cloudy
Van	North America	–2	5	fine

For each of the following statements, select Yes if the statement is true based solely on the information reported for these cities on this day. Otherwise select No.

Yes	No	Statements
		The mean maximum temperature for the cities in South America was greater than that for the cities in Oceania.
		At least one city reporting fine weather had a maximum temperature less than 0°C.
		For the Asian cities, the median minimum temperature was 12°C.

4

The table shows the top 15 universities in a recent international ranking of programs in physics and astronomy. Each university was assigned a score on a 100-point scale in each of several categories, from which a total score on a 100-point scale was computed. For each university, the table displays the total score together with the scores in 3 categories: academic, based on evaluation by academics at other universities; employer, based on evaluation by companies that recruit university graduates; and citations, based on the frequency with which faculty research is cited.

Attachment:

Rank	University	Country	Ac
1	University of Cambridge	United Kingdom	
2	Harvard University	United States	
3	University of Oxford	United Kingdom	
4	Massachusetts Institute of Technology (MIT)	United States	
5	University of California, Berkeley (UCB)	United States	
6	Stanford University	United States	
7	California Institute of Technology (Caltech)	United States	
8	Imperial College London	United Kingdom	
9	Princeton University	United States	
10	ETH Zürich (Swiss Federal Institute of Technology)	Switzerland	
11	University of Tokyo	Japan	
12	University of Chicago	United States	
13	University of California, Los Angeles (UCLA)	United States	
14	University of Melbourne	Australia	
15	Columbia University	United States	

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For each of the following statements, select Yes if the statement is true based on the information provided; otherwise, select No.

Yes	No	Statements
		For each of the United States universities listed, the employer score is less than the total score.
		For only one university listed, the employer score and the citations score are both greater than 50.
		University of Tokyo is the university for which the magnitude of the difference between the academic score and the total score is greatest.

5

During a recent semester at University X, 25 students enrolled in an economics class. Each student was enrolled in the university's 4-year business program and took the course either as a traditional student (attending class and sitting for exams in person) or as an online student (listening to lectures and taking exams via computer), but not both. For each student, the table indicates whether he or she took the course online, along with his or her year in the program and scores on Exam 1, Exam 2, and the final exam. The final score was computed as a weighted mean of the scores on Exam 1, Exam 2, and the final exam, using the same weights for each student.

Attachment:

Student surname	Online student? (Y/N)	Year in program	Exam 1 score	Exam 2 score	Final exam score	Final score
Abusuba	Y	2	89	87	85	86.50
Ardanin	N	1	85	83	84	84.00
Bar-Yaacov	Y	1	65	70	68	67.75
Benson	Y	1	77	80	75	76.75
Dedeoglu	N	2	90	96	95	94.00
Derezinski	Y	3	85	84	82	83.25
Garcia	Y	2	90	87	86	87.25
Hernandez	N	2	72	74	75	74.00
Jeyaretnam	Y	2	77	76	78	77.25
Lindt	Y	3	87	82	81	82.75
Mladek	N	4	64	75	76	72.75
Nguyen	N	3	70	74	72	72.00
Orlando	N	2	82	84	80	81.50
Pai	N	2	75	78	72	74.25
Parasarathy	N	2	88	91	95	92.25
Radzinsky	Y	3	91	95	100	96.50
Russell	N	4	51	69	72	66.00
Sweets	N	2	66	76	74	72.50
Sykes	N	3	51	69	73	66.50
Tachau	N	2	91	93	92	92.00
Tsosie	N	2	84	87	85	85.25
Underhill	N	1	77	75	71	73.50
Vladimirov	Y	3	69	75	74	73.00
Washburn	N	2	85	83	82	83.00
Zervos	N	2	95	97	98	97.00

For each of the following statements, select Yes if the statement is true based on the information provided; otherwise, select No.

Yes	No	Statements
		The score on the final exam had equal weight with the score on Exam 2 in computing the final score.
		The median final score for all 25 students was 81.50.
		For Exam 1 scores for students in year 3 of the program, the range was 40.