GMAT IR Practice Papers 9

Question 1
Tasha is taking a business course at South Hill Community College. Her final grade will be calculated using the formula
Weighted Grade = 0.6T + 0.4P
where T is her test average, and P is her project average.
Select a test average and a project average that will give her a weighted grade between 80% and 85%.
A) 48%
B) 65%
C) 86%
D) 93%
E) 100%

Question 2
According to the recommendations in the sources, which of the following would be the best fish for a pregnant woman to consume in order to reduce her blood pressure?

1. Swordfish
2. Atlantic salmon
3. Haddock
4. Freshwater trout
5. Shark

Nutritional Data: The table shows the amount of omega-3 fatty acids and mercury per four ounces of cooked fish. The EPA recommends woman who are pregnant, nursing, or may become pregnant consume no more than 0.1 micrograms of mercury per kilogram of body weight per day.

FISH VARIETY	MILLIGRAMS OF OMEGA-3 FATTY ACIDS	MICROGRAMS OF MERCURY
Anchovies, Herring, and Shad	2,300-2,400	5-10
Catfish	100-250	7
Cod: Atlantic and Pacific	200	14
Flounder, Plaice, and Sole	350	7

Haddock and Hake	200	2-5
Mackerel: Atlantic and Pacific (not King)	1,350-2,100	8-13
Mackerel: King	450	110
Marlin: Blue	250	69
Orange Roughy	42	80
Pollock: Atlantic and Walleye	600	6
Salmon: Atlantic, Chinook, Coho	1,200-2,400	2
Salmon: Pink and Sockeye	700-900	2
Sardines: Atlantic and Pacific	1,100-1,600	2
Shark	1,250	151
Swordfish	1,000	147
Tilapia	150	2
Tilefish: Gulf of Mexico	1,000	219
Trout: Freshwater	1,000-1,100	11
Tuna: Bluefin and Albacore	1,700	54-58

Tuna: Light Canned	150-300	13
Tuna: Skipjack and Yellowfin	150-350	31-49
Tuna: White (Albacore) Canned	1,000	40

Question 3

Write down the letters A,B,C,D and E on your notepaper. Now scan the table for the levels of Omega-3 fatty acids and write them down on your notepaper. Will you also need the mercury levels from the table? Read the question carefully and notice the word “pregnant”. There is a recommendation in the title of the table in relation to pregnant women and mercury, so you will need to note the mercury levels. Be aware also that two of the answer choices have two words in them, for example “Atlantic salmon”. Is this fish going to be found under “A” or under “S” in the table? A quick scan of the table will reveal that it will be found under “S”. Your table will look like this:

	Omega	Merc
A:	1,000	147
B:	1,200-1,400	2
C:	200	2-5
D:	1,000-1,100	11
E:	1,250	151

Atlantic salmon has the highest level of Omega-3 fatty acids and the lowest level of mercury. Therefore, choice B is correct.

Question 4

[Statement from the Board of Education]

The recent finding that our school's water system has been contaminated with lead is understandably shocking to parents. When we first discovered traces of lead in our water system, we were assured by local authorities that the levels were not dangerously high, and that running the taps prior to the school day would eliminate any risk posed to children. We now know that the levels are too high, and have taken appropriate measures to inform parents and students to ensure that no one is at risk.

[Article by Journalist]

The revelation that Borough Middle School has been allowing students to drink contaminated water for months is just one of a series of incidents throughout the county that has demonstrated negligence on the part of local and state authorities. In an effort to do as little as possible, the school instructed workers to remain quiet about the situation and open the taps every morning, believing that this would eliminate most of the lead in the water supply. However, the school should have informed families and students of the potential health hazards and allowed them the opportunity to make their own informed choices regarding these risks.

Which of the following, if true, would best support the journalist's conclusion that the actions of the school were negligent?
A) By law, schools do not have to inform families of lead unless they reach dangerously high levels as mandated by state authorities.
B) The risk levels for lead consumption are different among children and adults.
C) It is unknown how much lead is truly safe for children and adolescents to consume.

Question 5

STATE	2011 DOLLARS	2011 RANK	2010 DOLLARS	2010 RANK	2009 DOLLARS	2009 RANK
Connecticut	56,889	1	54,239	1	53,012	1
Massachusetts	53,621	2	51,304	2	49,788	2
New Jersey	53,181	3	51,139	3	49,549	3
Maryland	51,038	4	49,023	4	47,611	4

New York	50,545	5	48,596	5	46,824	5
Wyoming	47,301	6	44,961	6	43,568	6
Virginia	45,920	7	44,267	7	43,192	8
New Hampshire	45,787	8	43,698	9	42,537	9
North Dakota	45,747	9	42,890	10	39,790	17
Alaska	45,529	10	44,233	8	43,259	7
Minnesota	44,672	11	42,798	11	41,204	13
California	44,481	12	42,514	13	41,301	12
Washington	44,294	13	42,589	12	41,837	10
Illinois	44,140	14	42,040	15	41,045	14
Colorado	44,088	15	42,295	14	41,388	11
Rhode Island	43,992	16	41,995	16	40,595	15
Hawaii	43,053	17	41,550	17	40,572	16
Pennsylvania	42,478	18	40,604	18	39,449	18
Vermont	41,832	19	40,134	19	38,879	20
Delaware	41,635	20	40,097	20	38,981	19

You are also given three statements and asked to determine whether they are true using the information given in the table. An example of such a statement is the following:
In each year for which there is data, there were at least six states with per-capita incomes within a $1,000 range.
There will be two options for each statement, and to score points you must choose the correct option in relation to each of the three statements.
In the case of the statement above you must choose “yes” or “no”.
You have the ability to sort the data on the table by using a drop-down menu marked “Sort by…” In this case you can sort by, state, 2011 dollars, 2011 rank, 2010 dollars, 2010 rank, 2009 dollars and 2009 rank.
At the moment, the table is sorted by 2011 dollars. You can see that the states in positions 11 - 16 on the table have an income ranging from 44,672 to 43,992. This is within a $1,000 range.
You would next sort the table by 2010 dollars. When you do this, you will also notice that there 6 states within a $1,000 range. Finally, sort by 2009 dollars and the same conclusion can be drawn. The answer to this question is therefore “yes”.
Question 6
Take a look at the following example of a table analysis—calculating question.
This table represents the per capita income for some of the United States from 2009–2011.

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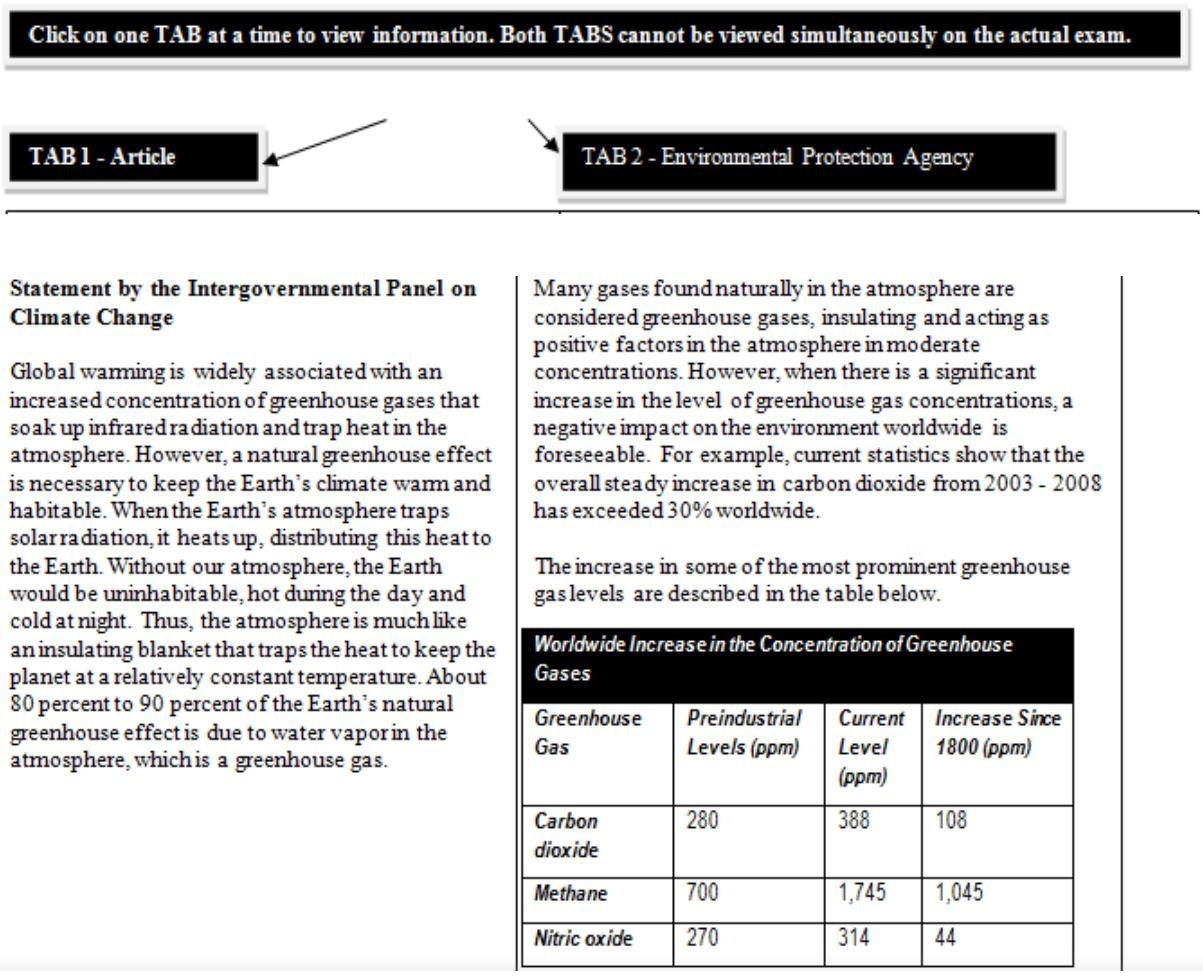
Suppose you were given the following statement:
The top three states in per capita income had percent increases of at least 6% between 2009 and 2010, as well as between 2010 and 2011.
Is it possible to show that the statement is true based on the information in the table?
You may notice that to calculate 6% of an uneven amount cannot be done quickly. Automatically you should be thinking that therefore this will not be necessary to do. An approximation will probably suffice. Let’s see.

The question asked you about increases of at least 6%. Therefore, try to find one that is less than 6% and you will be able to answer the question in the negative. Look for the smallest increase.
Scan the figures for the top three states. Look at the thousands of components of the figures. There is always a difference of 2000 except in the case of the figures for Connecticut between 2009 and 2010. Ballpark the figures to 50,000. 6% of 50,000 is 3,000. The difference between 2009 and 2010 is less than 3,000. Therefore, the correct answer to the question is “No”.
Take a look at the table again, and suppose you’re given the following statement:
The median state’s per capita income is closer to the 20th-ranked state’s per capita income than the 5th-ranked state’s per capita income for each year in the table.
Can you show the statement to be true using the data in the table?

Question 7

For three questions, decide whether the three statements are true or false. For one question (not appearing), answer a standard multiple-choice question with five answer choices. Information may include communications in the form of articles from newspapers or journals, e-mails, notes, letters, presentations, charts, and other sources.



Click on one TAB at a time to view information. Both TABS cannot be viewed simultaneously on the actual exam.

TAB 1 - Article | **TAB 2 - Environmental Protection Agency**

Statement by the Intergovernmental Panel on Climate Change

Global warming is widely associated with an increased concentration of greenhouse gases that soak up infrared radiation and trap heat in the atmosphere. However, a natural greenhouse effect is necessary to keep the Earth’s climate warm and habitable. When the Earth’s atmosphere traps solar radiation, it heats up, distributing this heat to the Earth. Without our atmosphere, the Earth would be uninhabitable, hot during the day and cold at night. Thus, the atmosphere is much like an insulating blanket that traps the heat to keep the planet at a relatively constant temperature. About 80 percent to 90 percent of the Earth’s natural greenhouse effect is due to water vapor in the atmosphere, which is a greenhouse gas.

Many gases found naturally in the atmosphere are considered greenhouse gases, insulating and acting as positive factors in the atmosphere in moderate concentrations. However, when there is a significant increase in the level of greenhouse gas concentrations, a negative impact on the environment worldwide is foreseeable. For example, current statistics show that the overall steady increase in carbon dioxide from 2003 - 2008 has exceeded 30% worldwide.

The increase in some of the most prominent greenhouse gas levels are described in the table below.

Worldwide Increase in the Concentration of Greenhouse Gases

Greenhouse Gas	*Preindustrial Levels (ppm)*	*Current Level (ppm)*	*Increase Since 1800 (ppm)*
Carbon dioxide	280	388	108
Methane	700	1,745	1,045
Nitric oxide	270	314	44

For each of the following statements, select *Yes* if the statement is true and can be reasonably inferred from the information provided. Otherwise, select *No*. information?

	Yes	No	
1A.			The percent increase of methane gas from the preindustrial period to the current level worldwide is 149.3.
1B.			Since 1800 the mean increase in the concentration of greenhouse gases is 399.
1C.			**Carbon dioxide accounts for 30% of the current level of the natural greenhouse effect worldwide.**

Question 8

Question Type: Table with data and a passage — click on the correct “yes” or “no” answer to three statements (or math expressions)

Number of questions in each problem set: 3

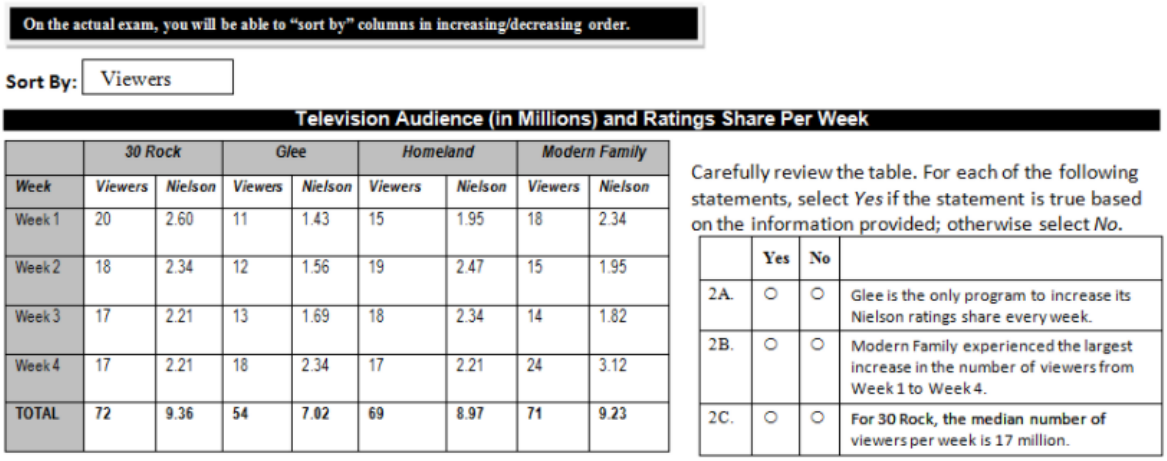
Each table contains specific headings for easy reference. Based on data from a table provided, questions will ask you to determine whether statements (or math expressions) are *true* or *false (yes* or *no).* On the actual exam, this type of question allows you to sort columns in increasing or decreasing order by clicking on a column’s heading (and viewing a drop-down list).

Read the passage and determine if each statement can, or cannot be determined based on your analysis of the table.

Question 9

The depth of statistical research helps advertising sponsors refine advertising campaigns based on viewing audience composition. The table below lists Nielsen Ratings with a detailed analysis of

viewers for four popular primetime television series. Statistical analysis includes demographics and viewer behaviors.



On the actual exam, you will be able to "sort by" columns in increasing/decreasing order.

Sort By: Viewers

Television Audience (in Millions) and Ratings Share Per Week

	30 Rock		*Glee*		*Homeland*		*Modern Family*	
Week	*Viewers*	*Nielson*	*Viewers*	*Nielson*	*Viewers*	*Nielson*	*Viewers*	*Nielson*
Week 1	20	2.60	11	1.43	15	1.95	18	2.34
Week 2	18	2.34	12	1.56	19	2.47	15	1.95
Week 3	17	2.21	13	1.69	18	2.34	14	1.82
Week 4	17	2.21	18	2.34	17	2.21	24	3.12
TOTAL	**72**	**9.36**	**54**	**7.02**	**69**	**8.97**	**71**	**9.23**

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

	Yes	No	
2A.	○	○	Glee is the only program to increase its Nielson ratings share every week.
2B.	○	○	Modern Family experienced the largest increase in the number of viewers from Week 1 to Week 4.
2C.	○	○	For 30 Rock, the median number of viewers per week is 17 million.

Question 10

Question Type: A graph (or diagram) with a short passage are followed by two fill-in-the blank statements.

Number of questions in each problem set: 2 (sometimes one statement with two blanks).

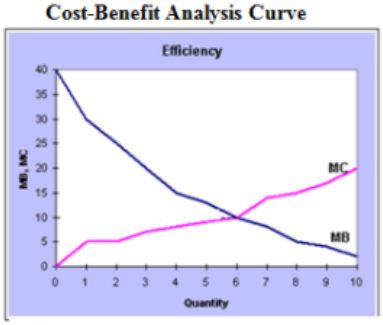
Graphics Interpretation questions appear with a bar, line, pie scatter plot graph, or flow/organizational chart. Questions in this format require that you interpret data from a graphic figure to complete a statement. Each statement contains one or two blanks with a "drop-down" menu to help you select the correct answer choice from among three to five choices.

Graphs fall into several categories:

- *Bar graph*—Shows comparisons among items in a data set.
- *Line graph*—Shows change in data over time.
- *Pie chart*—Shows comparisons of data as percentages of a whole.
- *Scatter plot*—Shows where individual data points fall in relation to a pair of variables.
- *Flow/organizational chart*—Shows a visual organization of steps in a process or the structure of relationships.

Question 11

Cost-Benefit Analysis Curve



MB = marginal benefits MC = marginal costs

Adherence to *cost-benefit analysis (COBA)* guidelines assists in the planning of costs associated with production. COBA clarifies the trade-offs between first costs and operating costs. In addition, COBA helps with decision-making to set production priorities. Standards vary depending on the country, state, industry, age of the factories, costs of new technologies and other adjustments needed to create and meet manufacturing compliance regulations.

In each question below, you will be presented with a statement that has one blank, indicating something has been omitted, or left out of the sentence. Use the given information to select the best answer to complete the statement.

3A. At which point on the graph does maximal economic efficiency occur? (6, 40), (10, 20), (6, 10), (10, 40)

3B. The marginal costs curve continues to rise after equilibrium, meaning costs are (stable), (increasing), (negligible).

Question 12

Question Type: Short passage (scenario) and statement outlining the task, followed by a two-column table with five to seven choices.

Number of questions in each problem set: 2

Two-part analysis questions ask you to read a short passage (scenario) and select two choices (parts) that best complete the task. Two columns with five to seven choices are provided from which you are to select your answers (one answer per column). The two-column headings are different, yet connected in some way. For example, “cause/effect,” “increase/decrease,” true/false,” “strengthen/weaken,” “height/width,” etc.

Question 13

At 9:00, Jacob and Keith were exactly 11,100 feet apart and Jacob began walking towards Keith at a constant rate. At 9:20, Keith also began walking at a constant rate towards Jacob. They reached the same point at exactly 9:30.

Indicate in the table below the rate at which each man walked. Make only one selection in each column by filling in the oval in the row that represents the correct answer. Note: on the actual exam, you will click on the two ovals that represent the correct answers.

	4A Jacob	4B Keith	Feet Per Minute
A	0	0	200
B	0	0	210
C	0	0	240
D	0	0	250
E	0	0	280
F	0	0	300

Question 14

The table displays data on *Brazilian agricultural* products in 2009.

Sort By: Select...

Commodity	Production, world share (%)	Production, world rank	Exports, world share (%)	Exports, world rank
Beef	16	2	22	1
Chickens	15	3	38	1
Coffee	40	1	32	1
Corn	8	4	10	2
Cotton	5	5	10	4
Orange juice	56	1	82	1
Pork	4	4	12	4
Soybeans	27	2	40	2
Sugar	21	1	44	1

For each of the following statements, select *Yes* if the statement can be shown to be true based on the information in the table. Otherwise select *No* .

Yes	No	
○	○	No individual country produces more than one-fourth of the world's sugar.
○	○	If Brazil produces less than 20% of the world's supply of any commodity listed in the table, Brazil is not the world's top exporter of that commodity.
○	○	Of the commodities in the table for which Brazil ranks first in world exports, Brazil produces more than 20% of the world's supply.

Question 15

Percentage of Population Visiting Selected Cultural Institutions, Single Year

Sort By: Select...

Country/ political union	Public library	Zoo/ aquarium	Natural history museum	Science/ technology museum
Russia	15	8	5	2
Brazil	25	28	7	4
European Union	35	27	20	18
South Korea	35	37	30	10
China	41	51	13	19
Japan	48	45	20	12
US	65	48	27	26

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	
○	○	The proportion of the population of Brazil that lives within close proximity to at least one museum is larger than that of Russia.
○	○	Of the countries/political unions in the table, Russia has the fewest natural history museums per capita.
○	○	Of the countries/political unions in the table, the three that spend the most money to promote their natural history museums are also those in which science is most highly valued.

Question 16

Sort By: Airport City

Airport			Passengers			Movements		
City	Country	Code	Number	% change	Rank	Number	% change	Rank
Amsterdam	NLD	AMS	47,430,019	−0.8	14	446,592	−1.7	17
Atlanta	USA	ATL	90,039,280	0.7	1	978,824	−1.6	1
Beijing	CHN	PEK	55,937,289	4.4	8	431,670	8.0	21
Charlotte	USA	CLT	34,739,020	4.7	26	536,253	2.6	9
Chicago	USA	ORD	69,353,876	−9.0	2	881,566	−4.9	2
Dallas/Ft Worth	USA	DFW	57,093,187	−4.5	7	656,310	−4.3	3
Denver	USA	DEN	51,245,334	2.8	10	619,503	0.9	5
Detroit	USA	DTW	35,135,828	−2.4	24	462,520	−1.0	15
Frankfurt	DEU	FRA	53,467,450	−1.3	9	485,783	1.4	12
Houston	USA	IAH	41,709,389	−3.0	16	576,062	−4.6	7
Las Vegas	USA	LAS	43,208,724	−8.0	15	578,949	−5.0	6
London	GBR	LHR	67,056,379	−1.5	3	478,518	−0.6	13
Los Angeles	USA	LAX	59,497,539	−4.7	6	622,506	−8.6	4
Madrid	ESP	MAD	50,824,435	−2.4	11	469,740	−2.6	14
Miami	USA	MIA	34,063,531	1.0	29	371,519	−3.8	29
Minneapolis	USA	MSP	34,056,443	−3.0	30	450,044	−0.7	16
Munich	DEU	MUC	34,530,593	1.7	27	432,296	0.1	20
Newark	USA	EWR	35,360,848	−2.8	23	434,428	−0.4	19
Paris	FRA	CDG	60,874,681	1.6	5	559,816	1.3	8
Phoenix	USA	PHX	39,891,193	−5.4	17	502,499	−6.8	10
San Francisco	USA	SFO	37,234,592	4.7	21	387,710	2.2	24

The table above gives information for 2008 on total passengers (total passengers enplaned and deplaned with passengers in transit counted once) and total movements (landing and takeoff of an aircraft) for 21 airports throughout the world. The 21 airports were chosen for inclusion in the table because, in 2008, each was among the busiest 30 airports in the world in terms of both total passengers and total movements. In addition to the numbers of total passengers and total movements for each airport, the table also gives the percent of increase and decrease over the numbers for 2007 and the rank of the airport for total passengers and total movements.

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 about these airports. For each statement indicate whether the statement is true or false, based on the information provided in the table.

True	False	
○	○	The airport experiencing the greatest percent decrease in total passengers from 2007 to 2008 also experienced the greatest decrease in the percent of movements.
○	○	The airport with the median rank based on total number of passengers is the same as the airport with the median rank based on total number of movements.
○	○	Exactly 50% of the airports that experienced an increase in both total number of passengers and in total number of movements are located in the United States (USA).

Question 17

The Quasi JX is a new car model. Under ideal driving conditions, the Quasi JX's fuel economy is E kilometers per liter ($E\ \frac{\text{km}}{\text{L}}$) when its driving speed is constant at S kilometers per hour ($S\ \frac{\text{km}}{\text{h}}$).

In terms of the variables S and E, select the expression that represents the number of liters of fuel used in 1 hour of driving under ideal driving conditions at a constant speed S, and select the expression that represents the number of liters of fuel used in a 60 km drive under ideal driving conditions at a constant speed S. Make only two selections, one in each column.

Liters of fuel in 1 h	Liters of fuel in 60 km	
○	○	$\frac{S}{E}$
○	○	$\frac{E}{S}$
○	○	$\frac{60}{E}$
○	○	$\frac{60}{S}$
○	○	$\frac{S}{60}$
○	○	$\frac{E}{60}$

Question 18

The following excerpt from a fictitious science news report discusses a fictitious type of location called a *morefa*.

For zoologists studying the behavior of certain species of birds, the critical importance of observing the birds in those species' morefa during the annual breeding season is obvious. Such observation allows researchers to study not only the courtship displays of many different individuals within a species, but also the species' social hierarchy. Moreover, since some species repeatedly return to the same morefa, researchers can study changes in group dynamics from year to year. The value of observing a morefa when the birds are not present, however—such as prior to their arrival or after they have abandoned the area to establish their nests—is only now becoming apparent.

Based on the definition of the imaginary word *morefa* that can be inferred from the previous paragraph, which of the following activities of a bird species must happen in a location for that location to be the species' morefa, and which must NOT happen in a location for that location to be the species' morefa? Make only two selections, one in each column.

Must happen in the location	Must not happen in the location	Activities of the members of the species
○	○	Sleeping
○	○	Occupying the location multiple times
○	○	Establishing nests
○	○	Gathering together with members of their own species
○	○	Territorial competition with members of different species

Question 19

Organization A currently has 1,050 members. Organization B currently has 1,550 members. The number of members of Organization A and the number of members of Organization B are increasing annually, each at its own constant rate. Analysts project that if each of these organizations maintains its constant annual rate of membership increase, five years from now they will for the first time have the same number of members, and in subsequent years Organization A will have more members than Organization B.

In the table below, identify a rate of increase, in members per year, for Organization A and a rate of increase, in members per year, for Organization B that together are consistent with the analysts' projection. Make only one selection in each column.

Organization A	Organization B	Rate of increase(members per year)
○	○	10
○	○	30
○	○	40
○	○	120
○	○	130
○	○	150

Question 20

Over a period of 5 academic years from Fall 1999 through Spring 2004, the number of faculty at a certain college increased despite a decrease in student enrollment from 5,500 students in Fall 1999.

In the given expressions, F and S represent the percent change in the number of faculty and students, respectively, over the 5 academic years, and R represents the number of students per faculty member in Fall 1999. The percent change in a quantity X is calculated using the formula $\left(\frac{X_{new} - X_{old}}{X_{old}}\right)(100)$.

Select the expression that represents the number of faculty in Fall 1999, and select the expression that represents the number of students per faculty member in Spring 2004. Make only two selections, one in each column.

Number of faculty in Fall 1999	Students per faculty member in Spring 2004	
○	○	$5{,}500\ R$
○	○	$\frac{5{,}500}{R}$
○	○	$\frac{1}{R}$
○	○	$\left(\frac{100 + S}{100 + F}\right)R$
○	○	$\left(\frac{100 - S}{100 + F}\right)R$
○	○	$\left(\frac{100 + F}{100 - S}\right)R$

Question 21

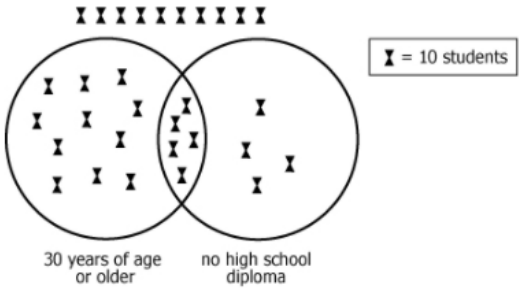
A literature department at a small university in an English-speaking country is organizing a two-day festival in which it will highlight the works of ten writers who have been the subjects of recent scholarly work by the faculty. Five writers will be featured each day. To reflect the department's strengths, the majority of writers scheduled for one of the days will be writers whose primary writing language is not English. On the other day of the festival, at least four of the writers will be women. Neither day should have more than two writers from the same country. Departmental members have already agreed on a schedule for eight of the writers. That schedule showing names, along with each writer's primary writing language and country of origin, is shown.

- Day 1:
  - Achebe (male, English, Nigeria)
  - Weil (female, French, France)
  - Gavalda (female, French, France)
  - Barrett Browning (female, English, UK)
- Day 2:
  - Rowling (female, English, UK)
  - Austen (female, English, UK)
  - Ocantos (male, Spanish, Argentina)
  - Lu Xun (male, Chinese, China)

Select a writer who could be added to the schedule for either day. Then select a writer who could be added to the schedule for neither day. Make only two selections, one in each column.

Either day	Neither day	Writer
○	○	LeGuin (female, English, USA)
○	○	Longfellow (male, English, USA)
○	○	Murasaki (female, Japanese, Japan)
○	○	Colette (female, French, France)
○	○	Vargas Llosa (male, Spanish, Peru)
○	○	Zola (male, French, France)

Question 22



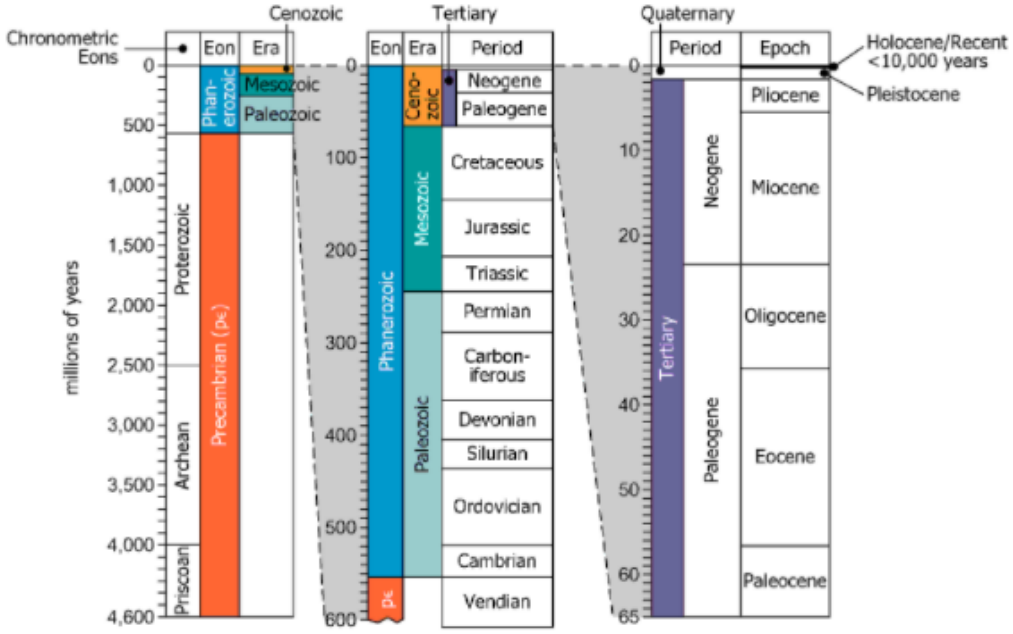
Refer to the pictograph of a survey of students at Central Community College. Each symbol represents 10 students in a sample of 300.

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

If one student is selected at random from the 300 surveyed, the chance that the student will be under 30 or a high school graduate or both is Select... .

If one student is selected at random from the 300 surveyed, the chance that the student will be both under 30 and a high school graduate is Select... .

Question 23



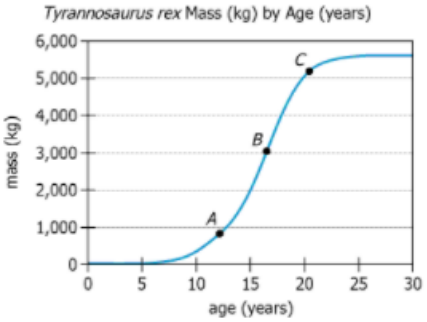
The diagram shows, in three column groupings, various divisions of Earth's geological history since its formation approximately 4,600 million years ago. In the leftmost column grouping, the Precambrian eon is subdivided into chronometric eons shown on the far left; but otherwise, in the rest of the graphic, each subsequent column to the right shows the subdivisions of the timeframes to its left. Each of the rightmost two column groupings is a magnification—with additional information—of a portion of the grouping directly to its left.

Fill each blank using the drop-down menu to create the most accurate statement on the basis of the information provided.

The Miocene epoch spans closest to [Select...] of the era of which it is a part.

According to the diagram the beginning of the [Select...] marks the onset of a new eon, era, and period in geological history.

Question 24



The graph models the hypothetical mass, in kilograms, of a *Tyrannosaurus rex* up to 30 years of age. Points *A* , *B* , and *C* represent the masses for a *Tyrannosaurus rex* at ages 12, 16, and 20, respectively, according to the model.

From each drop-down menu, select the option that creates the most accurate statement based on the information provided.

For integer values of the age from 12 to 30, the average (arithmetic mean) mass falls approximately between [Select...] kilograms.

The percent change in the mass from age 12 to age 16 is approximately [Select...] the percent change in the mass from age 16 to age 20.

Question 25

The graph at the left is a scatter plot with 40 points, each representing the temperature of the ocean water, measured at a fixed location off the coast of West Iceland, and the air temperature, measured on land at a fixed location in West Iceland. Both the water temperature and the air temperature, in degrees Celsius, were measured at noon on Wednesday of each of 40 consecutive weeks last year. The solid line is the regression line and the dashed line is the line through the points (0,0) and (6,6).

Use the drop-down menus to fill in the blanks in each of the following statements based on the information given by the graph.

The relationship between the water temperature and the air temperature is Select...

The slope of the regression line is Select... the slope of the dashed line.