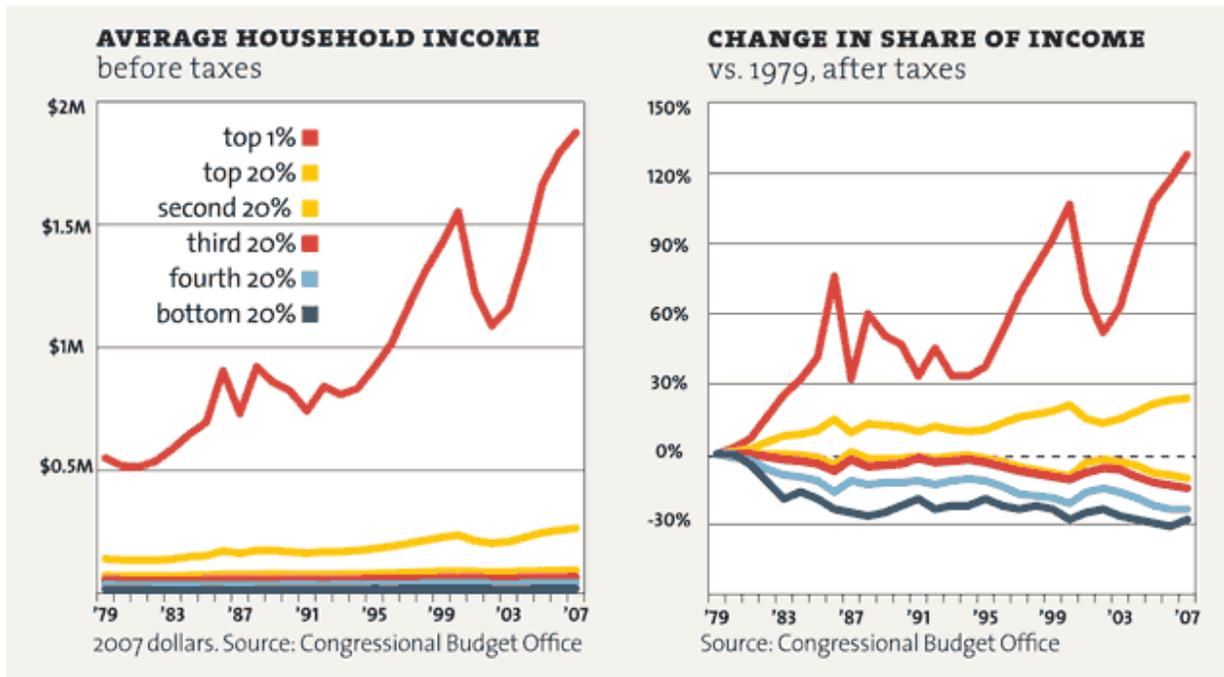


## Matching Test on Teaching Methods

Match the **defining** descriptor with the teaching method. *Some methods may be used more than once and others, not at all.*

- |   |                           |
|---|---------------------------|
| <input type="checkbox"/> Less mature students often dislike the lack of guidance      | 1. Case Method            |
| <input type="checkbox"/> Practice in factual recall and comprehension only            | 2. Classroom assessment   |
| <input type="checkbox"/> Teaches team skills  | 3. Clinicals              |
| <input type="checkbox"/> Known to increase attendance in large classes                | 4. Cooperative learning   |
| <input type="checkbox"/> Community outreach with reflection                           | 5. Discussion             |
| <input type="checkbox"/> Imitations of real situations with students as acting agents | 6. Inquiry-based learning |
| <input type="checkbox"/> Based on a good story, either real or realistic              | 7. Interactive lecture    |
| <input type="checkbox"/> Team learning is a highly structured version                 | 8. Problem-based learning |
| <input type="checkbox"/> Usually conducted in medical or public health settings       | 9. Recitation             |
| <input type="checkbox"/> Students must conduct independent, out-of-class research     | 10. Service-learning      |
| <input type="checkbox"/> Relies on questions with multiple respectable answers        | 11. Simulations           |
| <input type="checkbox"/> Students discover knowledge by pursuing questions            | 12. Student-peer feedback |
| <input type="checkbox"/> Relies on brief student activities every 15-20 minutes       | 13. Writing exercises     |
| <input type="checkbox"/> For feedback to the instructor on student learning           |                           |
| <input type="checkbox"/> Requires “debriefing” at the end                             |                           |
| <input type="checkbox"/> Mainstay of the “seminar”                                    |                           |



The following items are **multiple true/false**. To the left of each statement, put "T" if it is true and "F" if it is false.

Which of the following statements is/are valid conclusions you can draw from the graphs above:

- 1. From 1979 to 2007, household income inequality increased among the bottom 20%, fourth 20%, and third 20% of the U.S. population.
- 2. From 1979 to 2007, the change in the share of income dropped for all but the top 1%.
- 3. In terms of income, both the top 20% and top 1% benefited from the bull market in technology.
- 4. The graphs supply evidence in support the trickle-down theory that President Reagan espoused.
- 5. The graphs supply evidence of increasing polarization between the highest-income classes and the rest of society.
- 6. The graphs supply evidence that the wealth of the bottom 80% dropped from 1979 to 2007.

Which of the following statements is/are valid conclusions you can draw from the graphs above?

- 7. One graph analyzes income data before taxes and the other after taxes. They show that taxes have the effect of redistributing income from the higher paid to the lower-paid households.
- 8. Because the share of income dropped for most households, the U.S. economy has less money flowing through the system.
- 9. The stock market crash of 2000 most lowered the household income of the top 1%.
- 10. From 1979 to 2007, the sector that lost the largest share of household income was the bottom 20%.

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<b>Nations</b>	<b>Birthrate (per 1000 females)</b>	<b>Infant Mortality Rate (per 1000 births)</b>
Uganda	51	104
Somalia	50	122
Angola	47	137
Cambodia	46	112
Ethiopia	46	110
Pakistan	40	109
Canada	14	6.8
France	13	6.7
Denmark	13	6.6
Italy	10	8.3
Germany	10	5.9
Japan	10	4.4

Source: Information Please Almanac, 2006

The item below is a multiple true-false item. If the statement is true, put "T" for "True" in the blank space next to the number of the item. If the statement is false, put "F" for "False."

Which is a valid generalization based on the information in the table?

- \_\_\_1. In developing nations, the infant mortality rate decreases as the birthrate increases.
- \_\_\_2. Industrialized nations have lower birthrates and infant mortality rates than developing nations.
- \_\_\_3. Decreasing the infant mortality rate will limit population growth in developing nations.
- \_\_\_4. Industrialized nations have higher population densities than developing nations.
- \_\_\_5. Developing nations have ten times the infant mortality of industrialized nations.
- \_\_\_6. The lowest birthrates are found in Western Europe.
- \_\_\_7. The highest infant mortality rates are found in Latin America.

### **Political Science/History**

The task of economic policy is to create a prosperous America. The unfinished task of prosperous Americans is to build a Great Society. Our accomplishments have been many; these tasks remain unfinished:

- to achieve full employment without inflation;
- to restore external equilibrium and defend the dollar;
- to enhance the efficiency and flexibility of our private and public economies;
- to widen the benefits of prosperity;
- to improve the quality of American life

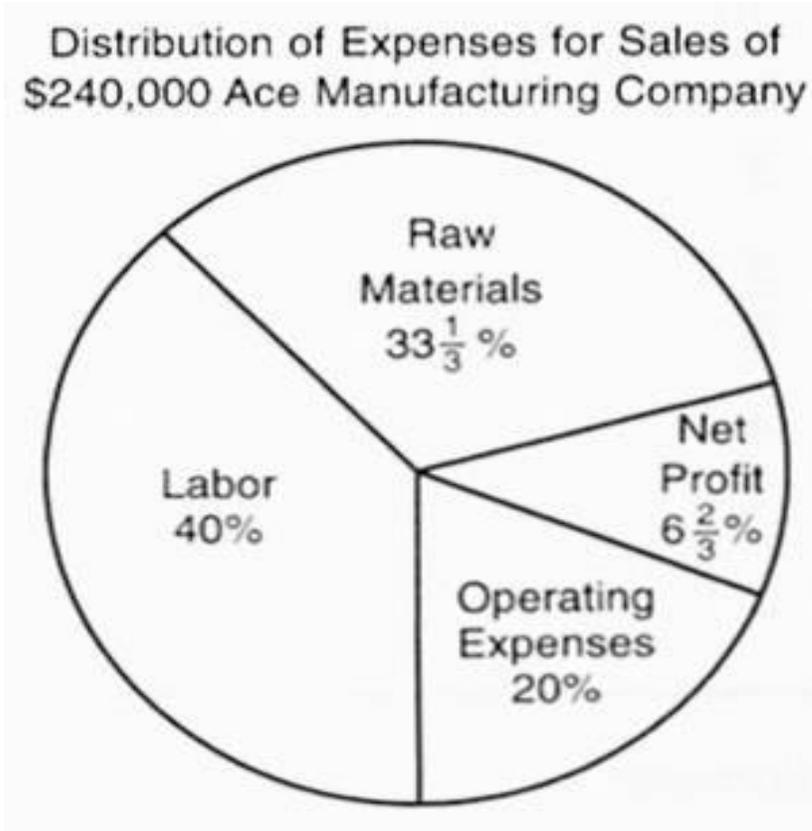
-- Lyndon B. Johnson

Former President Lyndon felt that the most important first step in the war against poverty is

- full employment
- a sound dollar
- private and public economics
- our natural defense
- efficiency in government

The speech implies that America's prosperity

- is threatened
- is at its peak
- must be retained
- must be broadened
- threatened Johnson's war against poverty



How many dollars were spent for labor?

- \$4,800
- \$9,600
- \$48,000
- \$96,000
- \$960,000

How many dollars were spent for Operating Expenses?

- \$4,800
- \$9,600
- \$48,000
- \$96,000
- \$960,000

**BARTER**

by Sara Teasdale

Life has loveliness to sell --  
All beautiful and splendid things,  
Blue waves whitened on a cliff,  
Climbing fire that sways and sings,  
(5) And children's faces looking up  
Holding wonder like a cup.

Life has loveliness to sell—  
Music like a curve of gold.  
Scent of pine trees in the rain,  
(10) Eyes that love you, arms that hold,  
And for your spirit's still delight,  
Holy thoughts that star the night.

Spend all you have for loveliness,  
Buy it and never count the cost.  
(15) For one white singing hour of peace  
Count many a year of strife well lost,  
And for a breath of ecstasy  
Give all you have been or could be.

The main idea of the poem is to urge us

- to be cautious in life
- to avoid strife
- to despise the ugly part of life
- to enjoy life's treasures
- not to become involved

The beauty of nature is indicated in line

- 3
- 6
- 10
- 12
- 16

There is a simile (comparison) in line

- 2
- 4
- 8
- 10
- 16

The poet includes the spiritual in life with the words

- "climbing fire"
- "children's faces"
- "arms that hold"
- "holy thoughts"
- "year of strife"

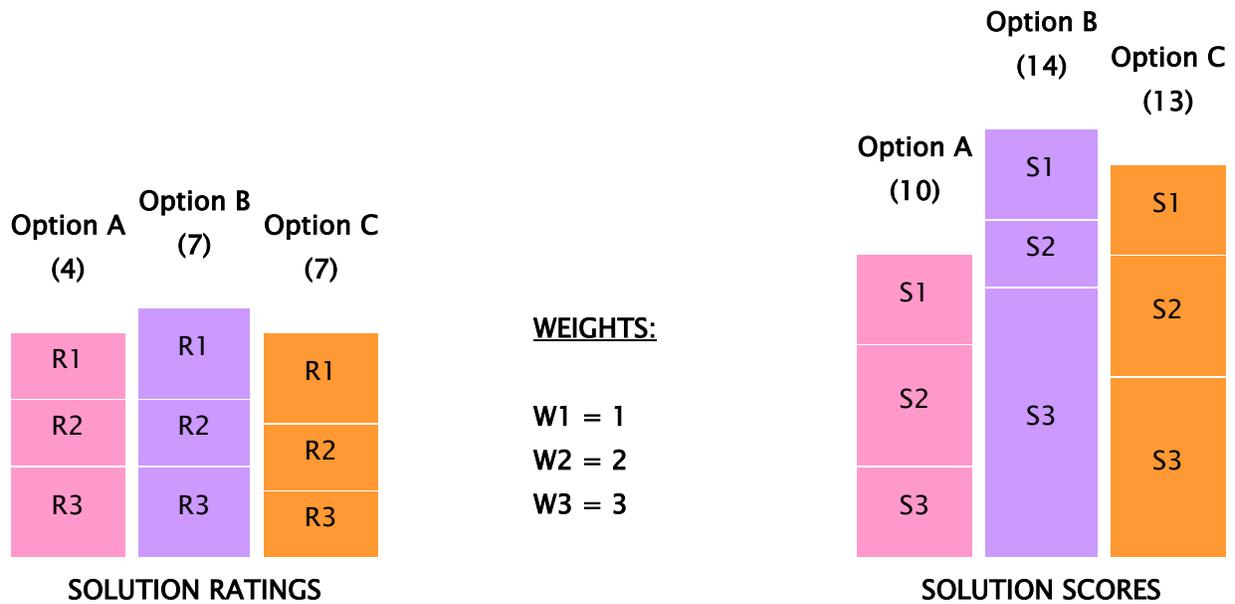
The word barter means exchange by trade without money. In the poem the exchange is

- personal commitment for life's beauty
- years of strife for brief ecstasy
- spirit's delight for peace
- children's faces for wonder
- music for a curve of gold

### **Management Decision Making/Decision Science**

A company has identified criteria C1, C2, and C3 playing a role in the final decision, with a respective weight of 1, 2, and 3. Moreover, it has identified three prospective providers--A, B, and C--whose offer may constitute a good solution. The information is laid out in the two histograms below, where the data

sources are the *ratings* and *scores* of evaluated solutions.



A valid generalization you can draw from the data in the histograms is:

- ⌘ Solutions A and B are equivalent and outperform solution C.
- ⌘ Solutions B and C are equivalent and outperform solution A.
- ⌘ Solutions A and C are equivalent and outperform solution B.
- ⌘ All the solutions are equivalent to one another.
- ⌘ None of the above.

Another valid generalization you can draw from the data in the histograms is:

- ⌘ Solution A is better than Solutions B and C on the criterion C3 but is weaker on C2.

*Nilson: Writing Objective Test Items That Assess Thinking Skills*

- ✘ Solution B is better than Solution C on the criterion C3 but is weaker on C2.
- ✘ Solution B distributes its forces more evenly than do Solutions A and C.
- ✘ Solution C is better on criterion C3 than it is on criteria C1 and C2.

The “best-of-breed” solution is:

- ✘ Solution A
- ✘ Solution B
- ✘ Solution C
- ✘ No solution in the histogram qualifies as “best-of-breed”

The “suite” or “integrated solution” is:

- ✘ Solution A
- ✘ Solution B
- ✘ Solution C
- ✘ No solution in the histogram qualifies as the “suite” or “integrated solution.”

## **Earth Sciences**

Humidity is the amount of water vapor in the air at a given time. At warm temperatures, air can hold more moisture than it can at cold temperatures. Relative humidity is the amount of vapor the air is holding expressed as a percentage of the amount the air is capable of holding. For example, at 86 degrees Fahrenheit, air can hold a maximum of 30.4 grams of water per cubic meter. If the air at the

same temperature is holding only 15.2 grams of water, the relative humidity is 50 percent. At the point at which the air becomes saturated (exceeds the level of water vapor it can hold), it releases water vapor in the form of dew or condensation.

If the air at 75 degrees is holding the maximum amount of moisture that it can, and the temperature suddenly drops to 60 degrees, what is likely to be the result?

- The humidity will remain unchanged.
- The relative humidity will decrease.
- Precipitation will be released in the form of rain.
- Precipitation will be released in the form of hail.
- Precipitation will be released in the form of snow.

During subfreezing days in many parts of the country, the indoor relative humidity decreases when homes are heated. Furniture and skin dry out, and static electricity increases. For health reasons, doctors recommend the use of humidifiers. Which of the following best explains the lack of humidity in the air indoors?

- The amount of water vapor in the air goes down.
- The water vapor in the air evaporates.
- The humidity in winter is lower.
- The cold temperatures prevent humidity.
- Dry air can only occur in warm air.

## **Statistics**

Two researchers were studying the relationship between amount of sleep each night and calories burned on an exercise bike for 42 men and women. They were interested if people who slept more had more energy to use during their exercise session. They obtained a correlation of .28, which has a two-tailed probability of .08. Alpha was .10.

1. Which is an example of a properly written research question?

- a. Is there a relationship between amount of sleep and energy expended?\*
  - b. Does amount of sleep correlate with energy used?
  - c. What is the cause of energy expended?
  - d. What is the value of rho?
2. What is the correct term for the variable amount of sleep?
- a. Dependent
  - b. Independent \*
  - c. Predictor
  - d. y
3. What is the correct statistical null hypothesis?
- a. There is no correlation between sleep and energy expended
  - b. Rho equals zero\*
  - c. R equals zero
  - d. Rho equals r
4. What conclusions should you draw regarding the null hypothesis?
- a. Reject\*
  - b. Accept
  - c. Cannot determine without more information
5. What conclusions should you draw regarding this study?
- a. The correlation was significant
  - b. The correlation was not significant
  - c. A small relationship exists\*
  - d. No relationship exists

**Biology**

One day you meet a student watching a wasp drag a paralyzed grasshopper down a small hole in the ground. When asked what he is doing he replies, "I'm watching that wasp store paralyzed grasshoppers in her nest to feed her offspring."

1. Which of the following is the best description of his reply?

- a. He is not a careful observer.
  - b. He is stating a conclusion only partly derived from his observation.\*
  - c. He is stating a conclusion entirely drawn from his observation.
  - d. He is making no assumptions.
2. Which of the following additional observations would add the most strength to the student's reply in Question 1?
- a. Observing the wasp digging a similar hole.
  - b. Observing the wasp dragging more grasshoppers into the hole. C.
  - c. Digging into the hole and observing wasp eggs on the paralyzed grasshopper.\*
  - d. Observing adult wasps emerging from the hole a month later.
3. Both of you wait until the wasp leaves the area, then you dig into the hole and observe three paralyzed grasshoppers, each with a white egg on its side. The student states that this evidence supports his reply in Question 1. Which of the following assumptions is he making?
- a. The eggs are grasshopper eggs.
  - b. The wasp laid the eggs.\*
  - c. The wasp dug the hole.
  - d. The wasp will return with another grasshopper.
4. You take the white eggs to the biology laboratory. Ten days later immature wasps hatched from the eggs. The student states that this evidence supports his reply in Question 1. Which of the following assumptions is he making?
- a. The wasp dug the hole.
  - b. The wasp stung the grasshoppers.
  - c. The grasshoppers were dead.
  - d. Paralyzed grasshoppers cannot lay eggs.\*

## References

- Bloom, B., & Associates. (1956). *Taxonomy of educational objectives*. New York, NY: David McKay.
- Ebel, R.L. (1978). The effectiveness of multiple true-false test items. *Educational and Psychological Measurement*, 38(1), 37–44.

- Frisby, D.A., & Sweeney, D.C. (1982). The relative merits of multiple true-false achievement tests. *Journal of Educational Measurement*, 19(1), 29–35.
- Gronlund, N.E., & Waugh, C.K. (2009). *Assessment of student achievement* (9th ed.). Needham Heights, MA: Allyn & Bacon.
- Instructional Assessment Resources, University of Texas at Austin. (2007). Assess students: Scenario-based approach. Retrieved from <http://www.utexas.edu/academic/diia/assessment/iar/students/plan/method/exams-mchoice-scenario.php>
- Huang, Y., Trevisan, M.S., & Storfer, A. (2007). The impact of the “all-of-the-above” option and student ability on multiple choice tests. *International Journal for the Scholarship of Teaching and Learning*, 1(2), 1–13.
- Jacobs, L.C., & Chase, C.I. (1992). *Developing and using tests effectively: A guide for faculty*. San Francisco, CA: Jossey-Bass.
- Laird, R. (2004). Heuristic models: Concept maps in neuroanatomy instruction. *The Teacher*, 6(1-2), 17-25.
- Mazur Group. (2008). Publications: Peer instruction. Retrieved from <http://mazur-www.harvard.edu/publications.php?functionDsearch&topicD8>
- McKeachie, W.J. (2002). *Teaching tips: Strategies, research, and theory for college and university teachers* (11th ed.). Boston, MA: Houghton Mifflin.
- Nilson, L.B. (2016). *Teaching at its best: A research-based resource for college instructors* (4th ed.). San Francisco, CA: Jossey-Bass.
- Ory, J.C., & Ryan, K.E. (1993). *Survival skills for college: Vol. 4. Tips for improving testing and grading*. Thousand Oaks, CA: Sage.
- Stalnaker, J.M. (1951). The essay type of examination. Pp. 495-530 In E.F. Lundquist (Ed.), *Educational measurement* (pp. 495-530). Menasha, WI: George Banta.
- Suskie, L. (2009). *Assessing student learning: A commonsense guide* (2nd ed.). San Francisco, CA: Jossey-Bass.
- Thalheimer, W. (2002). Simulation-like questions: The basics of how and why to write them. Retrieved from <http://www.work-learning.com/ma/pp/wp002.asp>
- Walvoord, B.E., & Anderson, V.J. (2009). *Effective grading: A tool for learning and assessment* (2<sup>nd</sup> ed.). San Francisco, CA: Jossey-Bass.