

Questions for “The Knowledge is Money Game” Level 2

Category 1: Brine Shrimp, Alcohol and the Scientific Method

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What hypothesis was tested in the brine shrimp experiment?

- a. Brine shrimp become inebriated when alcohol is present in their salt water.
- b. *Alcohol concentration can affect brine shrimp egg hatching rate.
- c. The density of brine shrimp eggs influences their rate of hatching.
- d. Brine shrimp can't figure out how to hatch when they are drunk.

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Which of the following is an independent variable in the brine shrimp experiment?

- a. hatching rate of brine shrimp
- b. concentration of marine salt solution
- c. *alcohol concentration in each Petri dish
- d. temperature of the classroom

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Which of the following is a dependent variable in the brine shrimp experiment?

- a. *hatching rate of brine shrimp
- b. concentration of marine salt solution
- c. alcohol concentration in each Petri dish
- d. temperature of the classroom

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The 0% alcohol condition

- a. controls for alcohol's effect on brine shrimp egg hatching.
- b. is not that important and can be skipped, if you run out of time.
- c. is essential to interpret the results from the alcohol conditions in the brine shrimp experiment.
- d. *Both a and c are correct.

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How can results be compared accurately across conditions with variable numbers of eggs in each?

- a. This experiment CANNOT be interpreted. It must be repeated without variability.
- b. *Results can be reported in terms of the proportion of live brine shrimp relative to the number of unhatched eggs in each condition (as a percent or a ratio). Proportions can be compared across conditions.
- c. Mix all the conditions together and count all the live brine shrimp and the total number of unhatched eggs. Report as a ratio.
- d. It's appropriate to eliminate from the data analysis all the conditions that do not support the hypothesis. This will significantly improve the ability to interpret the experiment.

Category 2: What's on the label?

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What does the "Government Warning" on every bottle of alcohol sold in the US, indicate?

- a. Women should not drink alcoholic beverages during pregnancy because of the risk of birth defects.
- b. Consumption of alcoholic beverages impairs your ability to drive a car or operate machinery.
- c. Consumption of alcoholic beverages may cause health problems.
- d. *All of the above are correct.

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What does "80 proof" mean?

- a. 80% of the population "approve" of this drink.
- b. *40% alcohol content by volume
- c. 80% alcohol content by volume
- d. 80 mls of beverage in the bottle

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What type of alcohol is in an alcoholic beverage?

- a. *Ethyl (ethanol)
- b. Isopropyl (isopropanol)
- c. Methyl (methanol)
- d. All of the above are correct.

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There are 750 mls of wine in a bottle. Thirty mls equals one ounce. If there are 5 ounces of wine in each "drink", how many "drinks" are there in this bottle of wine?

- a. 3
- b. *5
- c. 7
- d. 10

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There are 750 mls of vodka in a bottle. Thirty mls equals one ounce. If there are 1.5 ounces of hard liquor in each "drink", how many "drinks" are there in this bottle of vodka?

- a. 6 or 7
- b. 9 or 10
- c. 12 or 13
- d. *16 or 17

Category 3: The law

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Which of the following will allow the sale of alcohol to individuals who are younger than 21 years of age?

- a. Nevada
- b. District of Columbia
- c. Hawaii
- d. *None of the above. It is illegal to sell alcohol to anyone below the age of 21 in the US.

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What percentage of the criminal justice population is *estimated* to have alcohol-related birth defects?

- a. 5-6%
- b. 10-15%
- c. 25-35%
- d. *50-80%

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The reasons why individuals with alcohol-related birth defects are more likely to be convicted of criminal acts may include that they:

- a. *do not understand the consequences of breaking laws.
- b. deliberately choose to defy the laws of society.
- c. are incapable of experiencing fear or remorse.
- d. All of the above are correct.

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Individuals with alcohol-related birth defects may also experience

- a. Poor impulse control
- b. Problems understanding cause and effect relationships
- c. Poor judgment
- d. *All of the above are correct.

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Which of the following dates has been legislated as “Fetal Alcohol Syndrome Awareness Day” in some communities?

- a. January 1
- b. February 14
- c. *September 9
- d. November 23

Category 4: Effects on individuals

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Which of the following is associated with prenatal alcohol exposure?

- a. Low birth weight
- b. Fetal Alcohol Syndrome
- c. Miscarriage and stillbirths
- d. *All of the above are correct.

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Individuals with alcohol-related birth defects are more likely to

- a. be victimized by peers (stolen from, tricked, etc.)
- b. have difficulty making and keeping friends.
- c. be anxious to please others, so that they will gain acceptance.
- d. *All of the above are correct.

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Prenatal alcohol exposure correlates with increased risk for

- a. *depression.
- b. obesity.
- c. compulsive gambling disorders.
- d. All of the above are correct.

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What can you do to help a pregnant woman avoid alcohol?

- a. Encourage and support the woman's decision to avoid alcohol.
- b. Help her to avoid situations where alcohol is present.
- c. Stop drinking, as well.
- d. *All of the above are correct.

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What percentage of pregnancies is estimated to be unplanned?

- a. 80%
- b. *50%
- c. 10%
- d. 2%

Category 5: What's the price?

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What are examples of the extra costs the family must absorb to care for an individual with alcohol-related birth defects?

- a. medical costs
- b. lost wages on the part of the care giver
- c. special services
- d. *All of the above are correct.

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According to the National Organization on Fetal Alcohol Syndrome (NOFAS), the number of infants affected by alcohol-related birth defects each year exceeds those of

- a. Muscular dystrophy
- b. Spina bifida
- c. Down syndrome
- d. *All of the above, combined

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According to the National Organization on Fetal Alcohol Syndrome (NOFAS), which substance of abuse produces the most serious neurobehavioral effects in the fetus?

- a. cocaine
- b. heroine
- c. *alcohol
- d. marijuana

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In his letter to the President, (see "Learning more..." of this curriculum), John Kellerman, a young man with FAS, requests

- a. higher taxes on alcoholic beverages.
- b. *improved medical and support services for individuals like himself.
- c. more substance abuse centers.
- d. All of the above are correct.

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The annual estimated costs of just FAS, the most severe of the alcohol-related birth defects, in the US is in the range of

- a. *Billions of dollars
- b. 10's of millions of dollars
- c. Millions of dollars
- d. Hundreds of thousands of dollars