Directions: Match the word in the left column with the best definition/description in the right hand column. Some definitions/descriptions will not be used.
2 Points Each

1. Prevalence Rate	A. A comparison of the risk of disease in one group compared to the risk of disease in another group.
2. Relative Risk	B. The number of all current cases in a population during a certain time.
3. Risk Factor	C. The study of disease and health in human populations
4. Case Control Study	D. Personal behavior or lifestyle, an environmental exposure, or a family trait that might cause or add to a health problem
5. Retrospective Study	E. A study type that uses *cases* (with the health problem) and compares them with *controls* (without the health problem) to find out what may have caused the problem. A type of retrospective study
6. Hypothesis	F. A study type that finds people with and without a disease and then goes back to find out if their health habits could have caused the disease.
7. Case Definition	G. A way to describe who has the health problem by place and time. For example, researchers defined a case as a baby born in Cameron County between 1986 and 1991 with a diagnosis of anencephaly.
	H. A way to describe who has the health problem by place and time.
	I. An educated guess made after information is gathered and viewed. Research is done to test whether the hypothesis is true or not

/14

Fill-in-the-blank
Beside each disease indicate the causative agent (virus, bacterium, protozoan, none of the above) 1 Point Each

8. Lyme disease _____
9. Influenza _____
10. Anthrax _____
11. Rabies _____
12. Diabetes _____
13. Giardiasis _____
14. Plague _____

Directions: Answer the questions that follow.

15. Calculate the Attack Rate (Write your answer in the table) (4 Points total).

	Sick	Well	Total	Attack rate
Drank soda	10	3	13	
Did not drink soda	1	9	10	
Total	11	12	23	

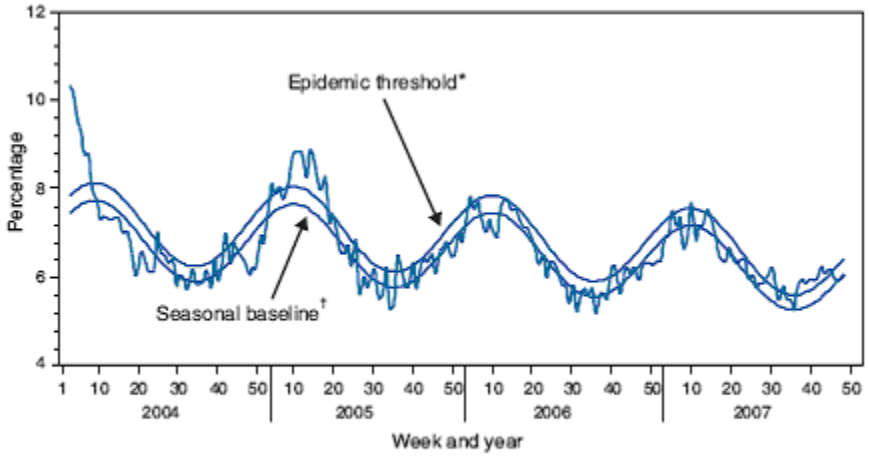
16. Using the data in Question 17, calculate the Odds Ratio (4 Points).

Answer_____

/15

Directions: Answer the questions that follow using Figure 1 (2 Points Each)

FIGURE 1 Percentage of all deaths attributed to pneumonia and influenza (P&I) reported by the 122 Cities Mortality Reporting System, by week and year — United States, 2004–2007



* The epidemic threshold is 1.645 standard deviations above the seasonal baseline.
† The seasonal baseline is projected using a robust regression procedure that applies a periodic regression model to the observed percentage of deaths from P&I during the preceding 5 years.

17. According to Figure 1 when will the flu/pneumonia be highest?
    a. January
    b. April
    c. July
    d. September

18. Explain what the epidemic threshold is in Figure 1 above.

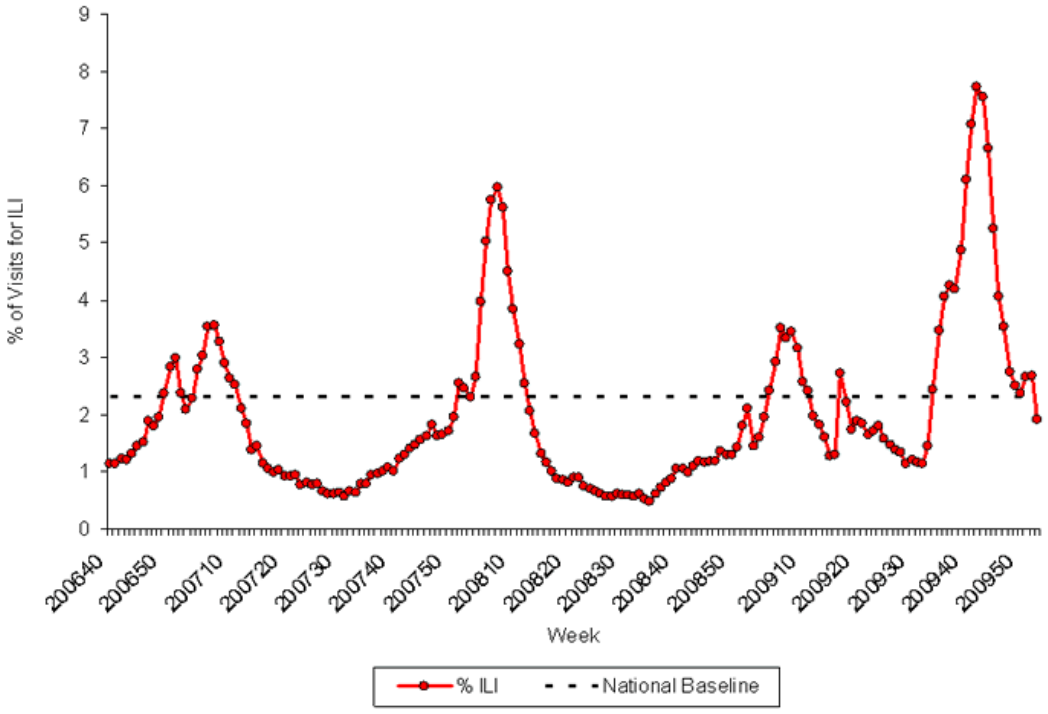
19. What does the word endemic mean?

20. According to Figure 1, is the flu/pneumonia endemic in Asia

/8

Directions: Answer the questions that follow using Figure 2 (2 Points Each)

Figure 2: Percentage of Visits for Influenza-like Illness (ILI) Reported by the U.S. Outpatient Influenza-like Illness Surveillance Network (ILINet), National Summary 2008-2009 and Previous Two Seasons (Posted January 15, 2010, 5:00 PM ET, for Week Ending January 8, 2010)



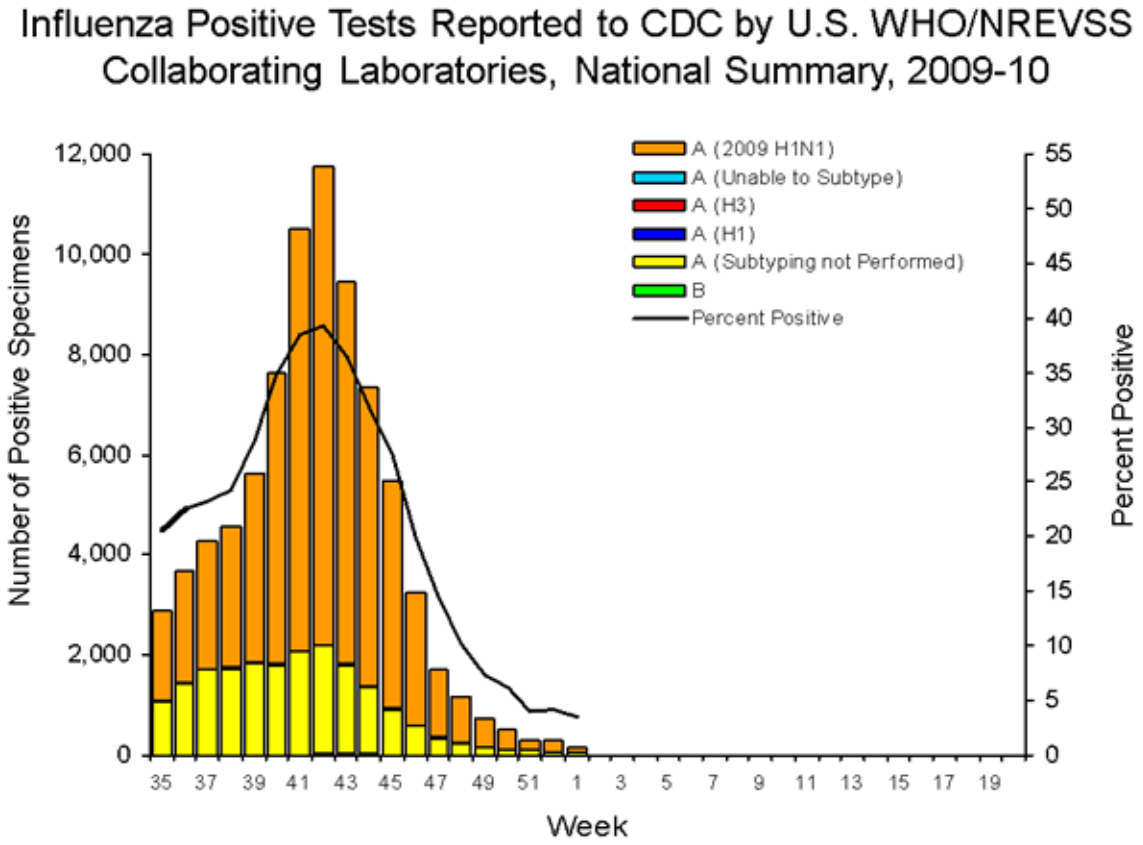
21. According to Figure 2, what was the peak visit number for ILI in 2008?
    a. 4%
    b. 6%
    c. 8%
    d. none of the above

22. According to Figure 2, which word BEST describes the flu?
    a. epidemic
    b. pandemic
    c. endemic
    d. deadly

/4

Directions: Answer the questions about the following data (2 Points Each):

Figure 3



23. According to Figure 2, during which week was the flu most prevalent?

a. 35
b. 42
c. 1
d. unable to determine

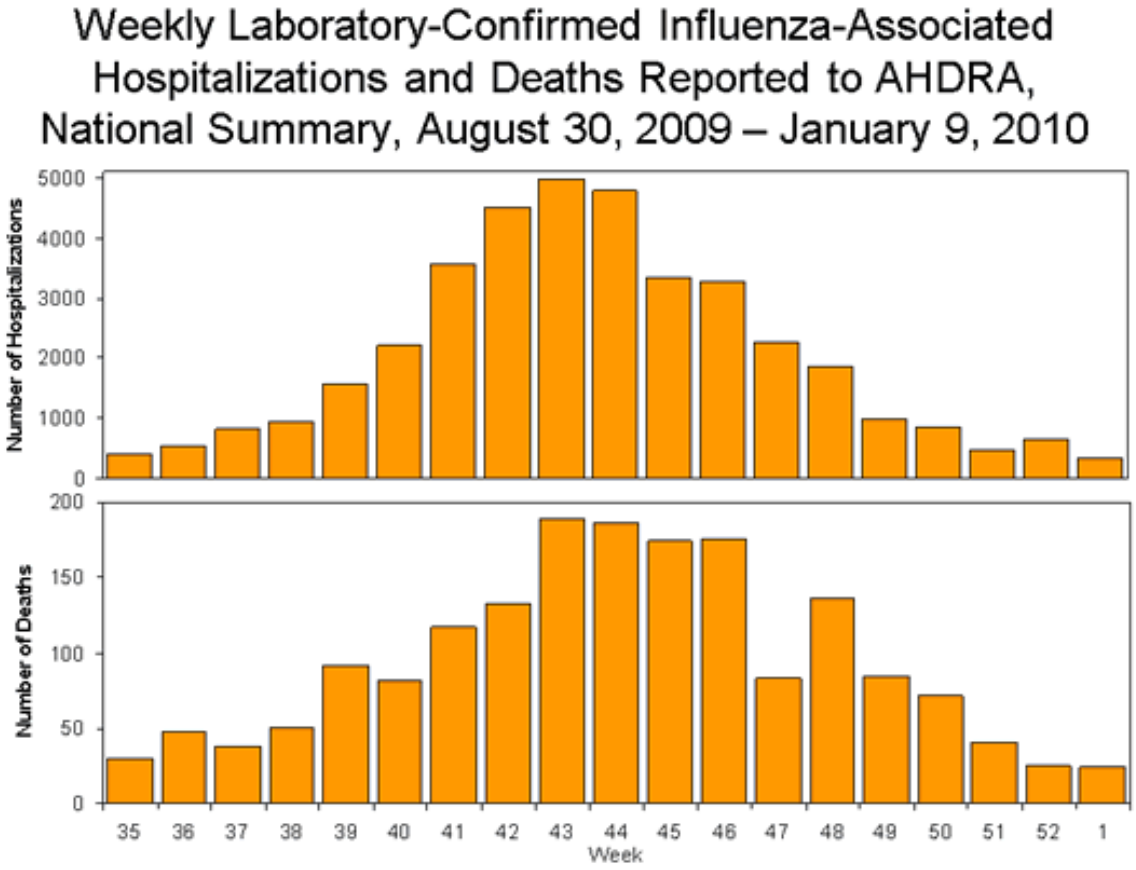
24. According to Figure 2, which strain of the flu virus is causing the flu?

a. H1N1
b. H3
c. H1

/4

Answer the questions about the following data (2 Points Each):

Figure 3



25. In one sentence, explain why the two bar graphs above look similar to each other.

26. According to the above bar graph, how many people in Georgia became hospitalized during week 38?

a. 100
b. 1000
c. 50
d. Unable to determine

/4

Directions: Match the word in the left column with the best definition/description in the right hand column. Some definitions/descriptions will not be used.
2 Points Each

27. Symbiosis	A. type of symbiosis where one organism is benefited at the expense of the other.
28. Parasitism	B. the relationship between the normal microbiota and the host.
29. Pathogenesis	C. the incidence of specific notifiable diseases.
30. Pathology	D. the manner in which a disease develops
31. Etiology	E. scientific study of disease
32. Zoonosis	F. the cause of disease
33. Vectors	G. animals that carry pathogens from one host to another.
	H. any nonliving object involved in the spread of an infection.
	I. diseases that occur primarily in wild and domestic animals and can be transmitted to humans.

/14

Directions: Answer the questions that follow using the provided information

A car show was held on January 3, 1970 in Hawaii. Many people attended the event. About one week later, a hospital reported that 500 people had tested positive for an acute respiratory infection. The patients were interviewed and it was found that 450 of the 500 patients had attended the car show on January 3 in Hawaii. Local epidemiologists contacted 1,000 other people that went to the show. None of them were sick. 750 other people who did not go to the car show were contacted and none of these people had the respiratory infection.

34. What type of study design is this (2 point)?

35. Calculate the Odds Ratio for the association between illness and attendance at the show (3 points).

Answer:_____

36. Assume that the odds ratio you calculated is greater than 1. What does an odds ratio greater than 1 mean (2 points)?

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Tiebreaker

Match the disease with mode of transmission. Write the letter of your choice next to the word (1 point each).

____ 1. Hepatitis A	A. Tick-borne
____ 2. Hepatitis B	B. Blood/sexual
____ 3. HIV	C. Food-borne/fecal-oral
____ 4. E. coli O157:H7	D. Mosquito-borne
____ 5. West Nile Virus	E. Unknown
____ 6. Lyme Disease	
____ 7. Kawasaki Disease	
____ 8. Campylobacter	
____ 9. Rocky Mountain Spotted Fever	
____ 10. Malaria	

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