

Name: _____
Teacher: _____
Class/ Block: _____
Date: _____

Venn Diagrams

Please answer each question. Clearly identify your final answer!!
No work or explanation = No Credit

<p>1. In a class there are 30 students. 21 students like Math, 16 students like English, 6 students don't like Math or English. How many students like both Math and English?</p> <p>A. What is $P(\text{math} \mid \text{English})$? B. What is $P(\text{English only})$?</p>	
<p>2. In a class of 32 students; 20 say that they like cake and 14 say that they like burgers. There are 6 students who do not like either. How many of them like both cake and burgers?</p> <p>A. What is $P(\text{don't like cake or Burgers})$?</p>	
<p>3. Out of fifty students; 19 are taking English Composition and 34 are taking Chemistry. If five students are in both classes, how many students are in English class only?</p> <p>A. Find $P(\text{English and Chem})$. B. What is $P(\text{chem} \mid \text{English})$?</p>	
<p>4. In a class there are: 10 students who play soccer and basketball, 7 students do not play soccer or basketball, 13 students play soccer, 19 students play basketball. Draw a Venn diagram to depict this scenario.</p> <p>A. Find $P(\text{basketball} \mid \text{soccer})$. B. Find $P(\text{soccer or basketball})$. C. Find $P(\text{soccer} \mid \text{no soccer})$.</p>	

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<p>5. In a camp there are a total of 40 students. 32 students play only tennis and 5 students play only hockey. How many student play both hockey and tennis?</p> <ul style="list-style-type: none">A. Find $P(\text{hockey} \mid \text{tennis})$B. Find $P(\text{tennis or hockey})$C. Find $P(\text{not hockey})$	
<p>6. 56 people took a survey on whether they preferred ice cream, donuts, or cupcakes. After taking the survey we found that 17 people preferred ice cream, 16 preferred donuts, and 22 preferred cupcakes. 2 people liked ice cream and donuts, 3 people liked ice cream and cupcakes, and 4 liked donuts and cupcakes. 9 liked all three. 1 person didn't like any of the three.</p> <ul style="list-style-type: none">A. Find $P(\text{both cupcakes and ice cream})$B. Find $P(\text{donuts} \mid \text{ice cream})$	
<p>7. Darien surveyed 38 students about which user iPhone and Androids. 18 responded iPhone user, 14 said Android user, and 9 said neither iPhone nor Android.</p> <ul style="list-style-type: none">A. What is $P(\text{iPhone} \mid \text{no Android})$?B. What is $P(\text{only iPhone})$?C. What is $P(\text{Android or iPhone})$?	
<p>8. Use #7 and find the following:</p> <ul style="list-style-type: none">A. Find $P(\text{Android})$.B. Find $P(\text{only Android})$.C. Find $P(\text{not Adroid})$.D. Find $P(\text{Iphone} \mid \text{Android})$.	
<p>9. 26 people were surveyed about their choice of cell phones. The survey finds that 14 people have Apple iPhones, 10 have Samsungs, and 5 have Nokias. Four have Apple iPhones and Samsungs, 3 have Apple iPhones and Nokias, and one has a Samsung and a Nokia. If no one has all three kinds of phone, how many people have none of these cell phones?</p> <ul style="list-style-type: none">A. Find $P(\text{Apple} \mid \text{Samsung})$.B. Find $P(\text{No Nokia} \mid \text{Apple})$.C. Find $P(\text{Samsung} \mid \text{No Apple})$.	

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