

## Bell Ringer

Tuesday 5/7

Simplify each expression.

1.  $\left(\frac{3x^2}{3x^2}\right)^4$   $(3x^{\frac{1}{2}})(3x^{\frac{1}{2}})(3x^{\frac{1}{2}})$

$$3^4 x^2$$

$$81x^2$$

2.  $\frac{4x^3y^{-5}}{x^4y}$

$$= \frac{4}{x^1 y^6}$$

Rewrite each expression in radical form.

3.  $\frac{7x^2}{7xy^2}$

$$7x \sqrt{y}$$

4.  $(7xy)^{\frac{2}{5}}$

$$\sqrt[5]{(7xy)^2}$$

14.5 due tomorrow - questions?

Name: \_\_\_\_\_ Hr: \_\_\_\_\_

## 14.5

## Conditional Probability 2

Use the table below to answer questions 1 through 5.

	Adult	Child	Total
Vanilla	52	26	78
Chocolate	41	105	146
Total	93	131	224

1. What percent of the people like chocolate?
2. What percent of the children like vanilla?
3. What percent of those that like chocolate are adults?
4. What percent of the people surveyed were children that liked chocolate?
5. Is chocolate more popular among children or adults? Explain your reasoning.

The following table represents data from a survey of people asking them if they slept better after eating a big meal. Data indicating whether or not the participants ate a big meal as well as whether or not they slept well is recorded in the table below.

Complete the table:

	Big Meal	Not a Big Meal	Total
Slept Well		505	1517
Didn't Sleep Well		299	
Total			2000

6. Of those that slept well, what percentage ate a big meal?
7. Of those that ate a big meal, what percentage slept well?
8. What is the sample space of this survey? (What are the possible responses?)
9. From the survey data, would you conclude that eating a big meal will help you sleep well? Why or why not?

Secondary II Unit 14 – Probabilities: Task 14.6

Categorical Data

Name: \_\_\_\_\_

Hour: \_\_\_\_\_

Students at Ridgeline High School were asked if they were going to attend the football game on Friday night. The answers they gave are found below. Please fill in all of the missing parts.

Symbols	2-way Table																
<p>Key:                      Male = M      Female = F                      Attend = Y    Not Attend = N</p> <p>Sample size = 1500</p> <p><math>P(Y) = 432/1500</math></p> <p><math>P(M) = 851/1500</math></p> <p><math>P(F Y) = 194/432</math></p> <p>a) <math>P(Y E) = \frac{194}{649} = 30\%</math></p> <p>b) <math>P(M \cap Y) = \frac{238}{1500} = 16\%</math></p> <p>c) <math>P(M \cup Y) = \frac{851 + 432 - 238}{1500} = \frac{1045}{1500} = 70\%</math></p>	<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th></th> <th>Attend</th> <th>Not Attend</th> <th>Total</th> </tr> </thead> <tbody> <tr> <th>Male</th> <td>238</td> <td>613</td> <td>851</td> </tr> <tr> <th>Female</th> <td>194</td> <td>455</td> <td>649</td> </tr> <tr> <th>Total</th> <td>432</td> <td>1,068</td> <td>1,500</td> </tr> </tbody> </table>		Attend	Not Attend	Total	Male	238	613	851	Female	194	455	649	Total	432	1,068	1,500
	Attend	Not Attend	Total														
Male	238	613	851														
Female	194	455	649														
Total	432	1,068	1,500														
<p>Venn Diagram</p>	<p>Tree Diagram</p>																

# due Thursday

## Secondary II Unit 14 – Probabilities: Assignment 14.6

**Categorical Data**

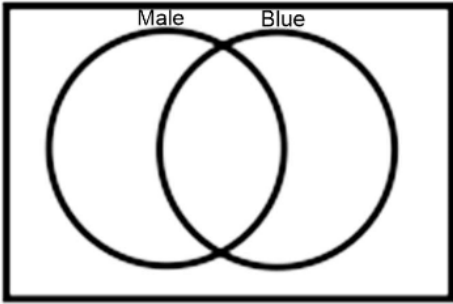
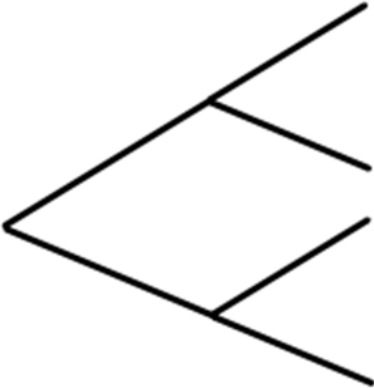
Name: \_\_\_\_\_

Hour: \_\_\_\_\_

**Part I**

What's your favorite color?

When asked this question, the most popular color named was blue.

Symbols	2-way Table																
<p>Key:                      Male = M      Female = F                      Blue = B      Not Blue = N</p> <p>Sample size = 200</p> <p><math>P(B) = 84/200</math></p> <p><math>P(M) = 64/200</math></p> <p><math>P(F B) = 48/84</math></p> <p><math>P(B F) =</math></p> <p><math>P(M \cap B) =</math></p> <p><math>P(M \cup B) =</math></p>	<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th style="width: 10%;"></th> <th style="width: 25%;">Blue</th> <th style="width: 25%;">Not Blue</th> <th style="width: 20%;">Total</th> </tr> </thead> <tbody> <tr> <td style="text-align: left;">Male</td> <td></td> <td></td> <td></td> </tr> <tr> <td style="text-align: left;">Female</td> <td></td> <td></td> <td></td> </tr> <tr> <td style="text-align: left;">Total</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>		Blue	Not Blue	Total	Male				Female				Total			
	Blue	Not Blue	Total														
Male																	
Female																	
Total																	
Venn Diagram	Tree Diagram																
																	

**Part II**

Are you a lefty or a righty?

Symbols	2-way Table																
<p>Key:                      Male = M                  Female = F                      Lefty = L                 Righty = R</p> <p>Sample size =</p> <p><math>P(L) =</math></p> <p><math>P(M) =</math></p> <p><math>P(F) =</math></p> <p><math>P(L F) =</math></p> <p><math>P(L M) =</math></p> <p>In this sample are there equal proportions of males and females who are left handed? Explain.</p>	<table border="1" style="margin: auto; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;"></th> <th style="width: 20%;">Lefty</th> <th style="width: 20%;">Righty</th> <th style="width: 10%;">Total</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">Male</td> <td style="width: 50px; height: 30px;"></td> <td style="width: 50px; height: 30px;"></td> <td style="width: 50px; height: 30px;"></td> </tr> <tr> <td style="text-align: center;">Female</td> <td style="width: 50px; height: 30px;"></td> <td style="width: 50px; height: 30px;"></td> <td style="width: 50px; height: 30px;"></td> </tr> <tr> <td style="text-align: center;">Total</td> <td style="width: 50px; height: 30px;"></td> <td style="width: 50px; height: 30px;"></td> <td style="width: 50px; height: 30px;"></td> </tr> </tbody> </table>		Lefty	Righty	Total	Male				Female				Total			
	Lefty	Righty	Total														
Male																	
Female																	
Total																	
Venn Diagram	Tree Diagram																

**Part III**

Do you eat breakfast or not?

Symbols	2-way Table																
<p>Key:                      Male = M                  Female = F                      Eats Breakfast = E      Doesn't Eat Breakfast = D</p> <p>Sample size =</p> <p><math>P(E) =</math></p> <p><math>P(E M) =</math></p> <p><math>P(E \cap M)</math></p> <p><math>P(E F) =</math></p> <p><math>P(E \cap F) =</math></p>	<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th style="width: 10%;"></th> <th style="width: 20%;">Eats</th> <th style="width: 20%;">Doesn't</th> <th style="width: 10%;">Total</th> </tr> </thead> <tbody> <tr> <td style="text-align: left;">Male</td> <td></td> <td></td> <td></td> </tr> <tr> <td style="text-align: left;">Female</td> <td></td> <td></td> <td></td> </tr> <tr> <td style="text-align: left;">Total</td> <td></td> <td></td> <td><b>600</b></td> </tr> </tbody> </table>		Eats	Doesn't	Total	Male				Female				Total			<b>600</b>
	Eats	Doesn't	Total														
Male																	
Female																	
Total			<b>600</b>														
Venn Diagram	Tree Diagram																
