ACTIVITY 4: Shake It Up with Tree Diagrams

NAME:  
DATE:  

1. List the possible events that could happen if a hurricane has been identified.
2. What is the probability that this hurricane is a Category 1 after 16 hours? Write your answer as a fraction and a percentage.
3. What is the probability that this hurricane remains a Tropical Storm for the entire time? Write your answer as a fraction and a percentage.
4. What is the probability that this hurricane is a Category 2 after 16 hours? Write your answer as a fraction and a percentage.
5. After 10 hours, it is still likely that the hurricane will be a Category 1 or a Category 2. Explain your answer using fractions and a percentages.
6. If flooding is possible in any of these scenarios, would a storm and a flood be mutually exclusive events?

NAME:  
DATE:  

ACTIVITY 1: Histograms Manage a Flood of Data

NAME:  
DATE:  

1. Complete the histogram using the information provided in the table.
2. What was the range of average flood claim amounts in 2005? Write your answer using the information provided in the table.
3. What was the total amount paid out due to the Tropical Storm Tanya? Explain how you determined your answer.
4. Based on the information provided, would you expect a Tropical Storm to be a hurricane? Why or why not?
5. Are you the owner of Cyclone Secondhand Music and Movies, located in an area that has experienced a number of damaging tornadoes in the last ten years. It’s time to buy insurance. You own your space but have everything in it. The expectation of a tornado will affect the shows you choose to book about insurance. Think like an actuary. Think about the value of your property—costs of inventory, electronic equipment, and office supplies.
6. The losses experienced by your store are due to natural events. Then they determine costs related to each outcome. These costs may affect premium prices in the future. The tree diagram to the right shows some of the possible outcomes of a Category 1 hurricane over time. Study the tree diagram carefully and then answer the questions.

NAME:  
DATE:  

ACTIVITY 3: Tune In to Insurance

NAME:  
DATE:  

1. How much would you save over 10 years if you had basic fire insurance? What would be the cost to replace everything in your store? Work with your group to find an average claim amount and estimate. Show your work on the back of this sheet.
2. What would be the cost to replace everything in your store? Work with your group to find an average claim amount and estimate. Show your work on the back of this sheet.
3. What is the probability that this hurricane is a Category 1 after 16 hours? Write your answer as a fraction and a percentage.
4. What is the probability that this hurricane remains a Tropical Storm for the entire time? Write your answer as a fraction and a percentage.
5. What is the probability that this hurricane is a Category 2 after 16 hours? Write your answer as a fraction and a percentage.
6. After 10 hours, it is still likely that the hurricane will be a Category 1 or a Category 2. Explain your answer using fractions and a percentages.

NAME:  
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ACTIVITY 2: Branching Out with Tree Diagrams

NAME:  
DATE:  

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2. What would be the cost to replace everything in your store? Work with your group to find an average claim amount and estimate. Show your work on the back of this sheet.
3. What is the probability that this hurricane is a Category 1 after 16 hours? Write your answer as a fraction and a percentage.
4. What is the probability that this hurricane remains a Tropical Storm for the entire time? Write your answer as a fraction and a percentage.
5. What is the probability that this hurricane is a Category 2 after 16 hours? Write your answer as a fraction and a percentage.
6. After 10 hours, it is still likely that the hurricane will be a Category 1 or a Category 2. Explain your answer using fractions and a percentages.

NAME:  
DATE:  

ACTIVITY 1: Shake It Up with Scatterplots

NAME:  
DATE:  

NAME:  
DATE:  

1. Put the information given above as a scatterplot.  
2. Use a ruler and mark the “line of best fit” for the scatterplot you have created.
3. Plot the information given above as a scatterplot.
4. Based on this information, would you expect that a tropical storm always results in fewer flood claims than a hurricane? Explain your answer.

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DATE:  

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4. Based on this information, would you expect that a tropical storm always results in fewer flood claims than a hurricane? Explain your answer.