ACTIVITY 2:

Reproducible

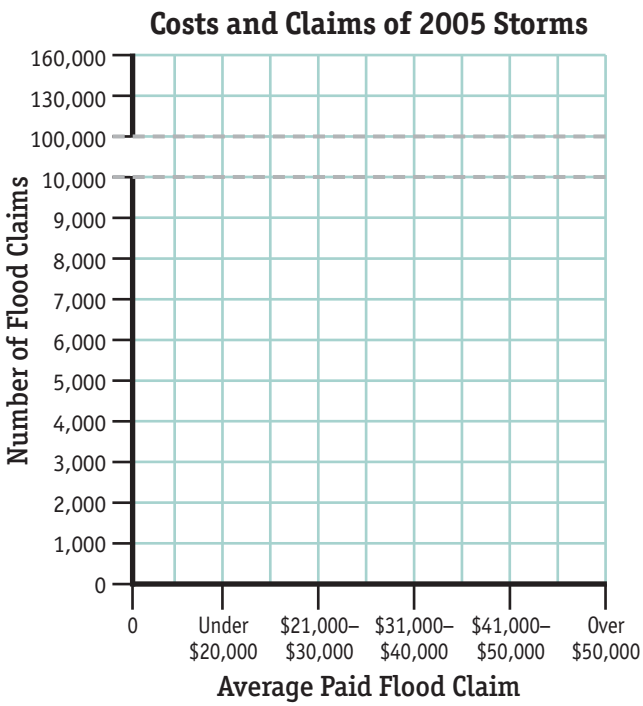
# Histograms Manage a Flood of Data

NAME: _____ DATE: _____

Actuaries can use histograms to analyze the frequency of submitted insurance claims after natural events and the range of average claim amounts insurance companies paid to customers over a particular period of time. The information in the table on the left below lists the number of flood insurance claims submitted and average paid flood claim amounts as a result of storms in 2005. An *average paid claim* is the average of all the flood claims paid by the insurance companies. Read the claims in the table, then answer the questions below.

Much of New Orleans, LA, was flooded after levees broke following Hurricane Katrina in August 2005.

| 2005 Storm | Category at Landfall | Number of Flood Claims | Average Paid Flood Claim |
|---|---|---|---|
| Hurricane Dennis | 3 | 3,332 | $26,687 |
| Hurricane Katrina | 3 | 158,786 | $94,750 |
| Hurricane Rita | 3 | 8,602 | $46,089 |
| Tropical Storm Tammy | not applicable | 3,600 | $10,213 |
| Hurricane Wilma | 3 | 8,474 | $36,126 |




## Questions:

1. Complete the histogram using the information provided in the table.
2. Which type of information provided is a "mean" and why is it useful? _____
3. What was the total amount paid out for Tropical Storm Tammy? _____
   Explain how you determined your answer. _____
4. Based on this information, would you expect that a tropical storm always results in fewer flood claims than a hurricane? _____ Why or why not? _____
5. You're the actuary: How would you advise an insurance company about what they should expect to pay during a Category 3 hurricane if they're expecting to have claims on 200,000 policies?
   (Hint: Using the information from the table above, come up with an average claim amount and estimate. Show your work on the back of this page.)

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