

Algebra Essentials and Applications Internet Activity

ME1 Hurricane Force Investigations

1. The Saffir/Simpson Hurricane Scale categorizes hurricanes depending on the wind speed (and other factors). Let h be the wind speed and write each of the five categories as an inequality or compound inequality. (Use \leq signs for your inequalities.)
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2. Find the Saffir/Simpson Scale category for each of the following hurricanes:

Hurricane	Date	Wind speed	Scale category
Andrew	August 24, 1992	145 mph	
Bonnie	August 26, 1996	105 mph	
Camille	August 17, 1969	190 mph	
Georges	September 21, 1998	90 mph	
Greta	September 19, 1978	115 mph	
Luis	September 5, 1995	135 mph	
Marilyn	September 17, 1995	125 mph	
Tanya	October 30, 1995	85 mph	

3. At the bottom of the screen, click on the link "Fujita Tornado Scale." This scale for tornadoes is similar to the one for hurricanes. Let t be the wind speed and write each of the seven categories (Notice there is a Category 0 here.) as an inequality or compound inequality. (Use \leq signs for your inequalities.)
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4. Because tornadoes strike and disappear so quickly, it is almost impossible to measure their wind speed. But in April 1974 there was an historic outbreak of as many as 148 tornadoes in a three-state area. One of these stayed on the ground for an extraordinary twenty-three minutes before dissipating. Scientists used home movies to approximate the wind velocity at 178 mph. Find the category of this twister on Professor Fujita's Tornado Scale.
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