Systems of Linear Inequalities

Perfect Storm

Two storms are approaching Northern Illinois. One storm, modeled in blue, by \( y < \frac{1}{2}x - 5 \), is bringing forth hail. A second storm, modeled in red, by \( y \geq -\frac{2}{5}x + 4 \), is bringing forth high winds with possible tornados.

a. Graph the two storms using the respective color designations on the map above.

b. Identify three counties that can expect to receive hail, but not a possible tornado.

c. Should all residents of Lee County prepare for a possible tornado? Explain.

d. Identify three counties that will not be impacted by either storm.

e. How many counties will potentially experience both hail and a possible tornado?

f. What is the difference between a tornado watch and a tornado warning?

g. What should you do if you need to take cover from a tornado?

h. Go to https://www.desmos.com/calculator/sqn5vhqvkx.
Check your graph and answers to the questions above using Desmos and other online resources.

Illinois Math & Science Academy
Remijan, Kelly W. “Perfect Storm” (2020). Teacher Resources. 4.
https://digitalcommons.imsa.edu/pfs_tr/4/