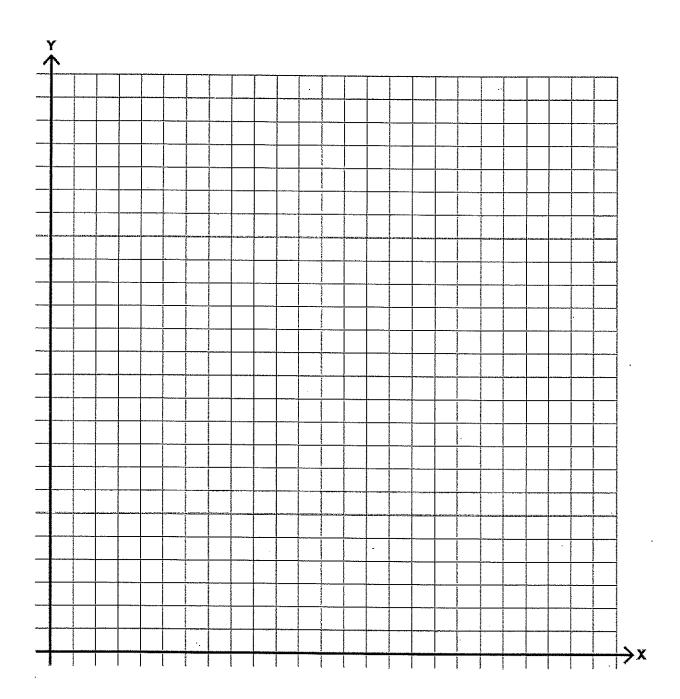# A-REI Braking Distance

Task

The braking distance, in feet, of a car traveling at v miles per hour is given by

$$d = 2.2v + \frac{v^2}{20}.$$

a. What is the braking distance, in feet, if the car is going 30 mph? 60 mph? 90 mph?

b. Suppose that the car took 500 feet to brake. Use your computations in part (a) to make a prediction about how fast it was going when the brakes were applied.

c. Use a graph of the distance equation to determine more precisely how fast it was going when the brakes were applied, and check your answer using the quadratic formula. DON'T COUNT BY ONES!!! USE YOUR HEAD ABOUT APPROPRIATE 'WINDOW' FOR THIS GRAPH!!

Y

X