

A-REI Braking Distance

Task

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

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

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



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