

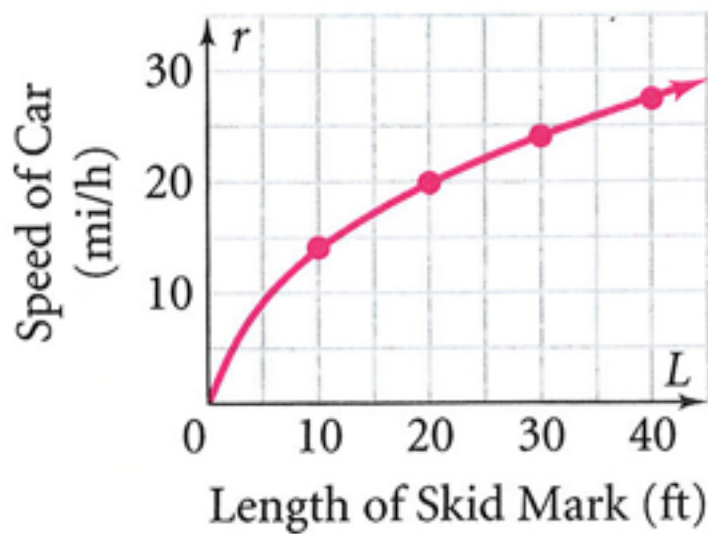


Police officers use mathematics and logical reasoning to analyze accidents.

3 EXAMPLE Application

In good weather conditions, police can use the formula $r = 2\sqrt{5L}$ to find the approximate speed r of a car that leaves a skid mark of length L in feet. Graph the function.

Length of Skid Mark (ft)	Speed (mi/h)
0	0
10	14.1
20	20
30	24.5
40	28.3



- 3 a. Copy and extend the graph in Example 3 for skid mark lengths from 60 ft to 100 ft.
b. **Critical Thinking** How long is the skid mark when a car's speed before putting on the brakes is 85 mi/h?