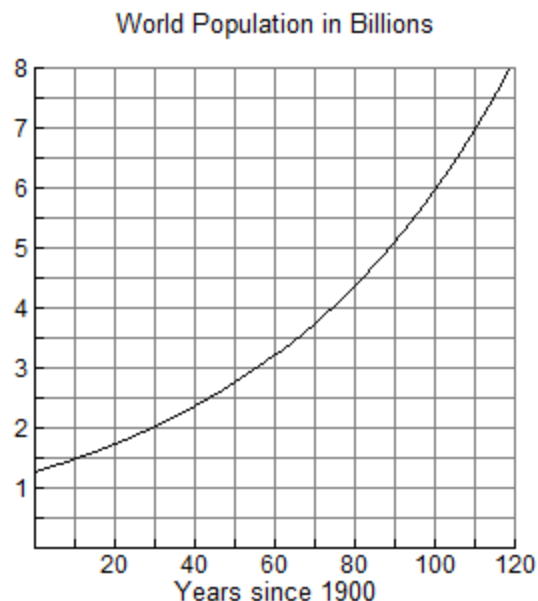


1. The graph shown models $W(t)$, the world population (in billions), where t is measured in years since 1900. Use this graph to estimate the average rate of change in the world population from 1950 to 2010 and write a sentence interpreting your result. Be sure to use appropriate units in your answer.



2. If a ball is projected vertically upward from the surface of the moon with a speed of 64 ft/s, its height in feet after t seconds is given by $h(t) = -2.6t^2 + 64t$.
- (a) Find the average speed of the ball during each of the following time intervals. **Use appropriate units in your answers.** Write your answers correct to at least two decimal places.

(i) [5, 5.5]	(ii) [5, 5.1]
(iii) [5, 5.01]	(iv) [5, 5.001]

- (b) Estimate the speed when $t = 5$ seconds.