

**55** A total of 15 minutes pass between 10:15 A.M. and 10:30 A.M. The minute hand has moved through an angle

of  $\frac{15}{60} \cdot 2\pi = \frac{30\pi}{60} = \frac{\pi}{2}$  radians. Therefore, the tip of the minute hand travels  $s = 4\left(\frac{\pi}{2}\right) = \frac{4\pi}{2} = 2\pi$  inches.

The linear speed of the tip of the minute hand is  $\frac{2\pi}{15}$  in / min.