

1. The top of the ladder is moving down at a speed of 1.5 m/s.
2. The top of the ladder is moving down at a speed of $\frac{\sqrt{15}}{5}$ ft/s (or approximately 0.77 ft/s).
3. Alice and Bob are moving apart at a speed of 7.94 mph.
4. The distance between the cars is changing at a rate of 139.84 mph.
5. Carol and Dan are moving apart at a speed of 6.84 mph.
6. The water level is rising at a rate of $\frac{3}{\pi}$ cm/min.
7.
 - a) The water level is rising at a rate of $\frac{25}{16\pi}$ ft/min.
 - b) The radius of the water is increasing at a rate of $\frac{5}{8\pi}$ ft/min.
8. The water level is increasing at a rate of 0.0125 ft/s.
9. The area is increasing at a rate of 11 mm²/s.
10. The area is changing at a rate of 0 cm²/min.