1. The area is increasing by a rate of 11 mm²/s.

2. The area is changing at a rate of 0 cm²/min.

3. The top of the ladder is moving down at a speed of 1.5 m/s.

4. The top of the ladder is moving down at a speed of 0.75 ft/s.

5. Alice and Bob are moving apart at a speed of 7.94 mph.

6. The distance between the cars is changing at a rate of 139.84 mph.

7. Carol and Dan are moving apart at a speed of 6.84 mph.

8. The water level is rising at a rate of $\frac{3}{\pi}$ cm/min.

9.
   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.