1.) A pebble dropped into a pond makes a circular wave that travels outward at a rate 0.4 meters per second. At what rate is the area of the circle increasing 2 seconds after the pebble strikes the pond?
2.) Suppose the distance between two planes must be maintained at 10 miles. Suppose plane $W$ is north of a radio tower and moving south while plane $G$ is east of the same radio tower. If plane $G$ is moving east at 1 mile/second, how fast should plane $W$ be moving when plane $G$ is 6 miles from the radio tower?
2.) Suppose car A is 110 miles north of an intersection and traveling south at 50 mph. Suppose car B is 100 miles east of the same intersection and traveling west at 20 mph. 1a.) At what rate are the cars approaching each other after 1 hour? 1b.) After 3 hours?