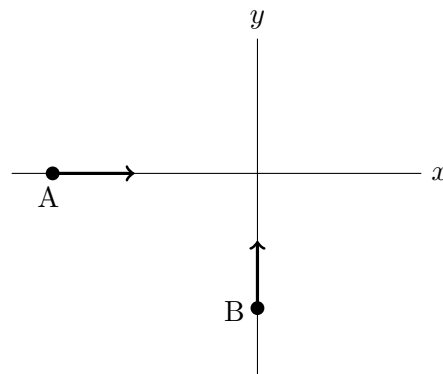


6. [6 points]

Assume the same setup in this problem as in the previous problem, and now additionally assume that at 1pm, Car A is 8 km west of the intersection traveling east at 50 kph, while Car B is 6 km south of the intersection traveling north at 100 kph. How fast is the distance between the two cars changing at 1pm?



Answer: The distance is INCREASING DECREASING at a rate of _____ kph.

7. [6 points] Find all local extrema of the function $p(x) = x^5 - 5x^4 + 5x^3 + 1$, and classify each as a local maximum or a local minimum. If there are none of a particular type, write NONE. Use calculus to find your answers, and make sure you show enough evidence to justify your conclusions.

Answer: Local min(s) at $x =$ _____

Answer: Local max(es) at $x =$ _____