1. (2 points each) Circle "True" or "False" for each of the following problems. Circle "True" only if the statement is *always* true. No explanation is necessary.

(a) Every continuous function is differentiable.

True FALSE

(b) If $f'(x) > 0$ for all x in the interval (a, b), then f is increasing on the interval (a, b).

TRUE False

(c) By definition, the instantaneous velocity is equal to a difference quotient.

True FALSE

(d) Every rational function has a vertical asymptote.

True FALSE

(e) If a function is not continuous at a point, then it is not defined at that point.

True FALSE

(f) If a function f is decreasing on an interval, then f' is decreasing on that interval.

True FALSE