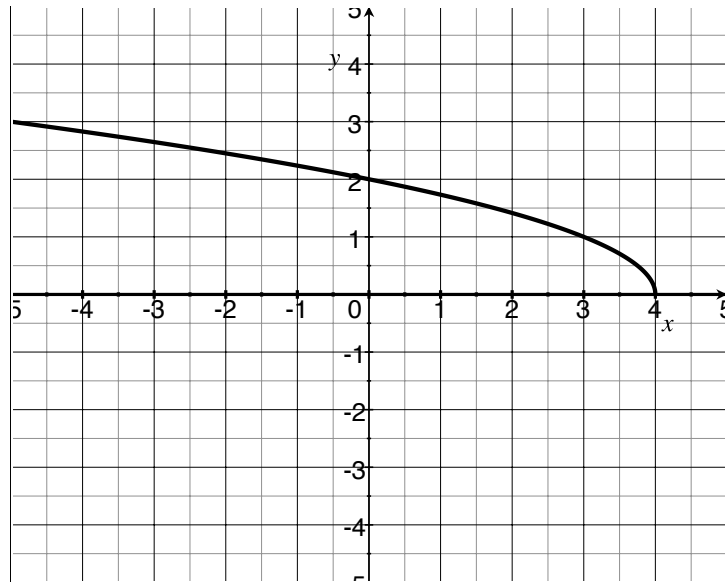


TMATH 124: Concept Check Day 12

Be sure to write down your ideas (numerically, algebraically, or geometrically) so that you can earn credit for your work!! To earn full marks for this you must attempt all problems.

1. Consider $f(x) = \sqrt{4-x}$, whose graph is provided below.

- (a) Find the equation of the line tangent of f at $x = 0$



- (b) Find the linear approximation of the function f at $x = 0$.

2. Given that the angle θ is increasing at a constant rate (of 6 radians per hour), find a formula relating $\frac{d\theta}{dt}$ to $\frac{dx}{dt}$.

