AP Calculus AB – Worksheet 5

1	Consider the function $f(x) = 4x - x^2$ and the point $P(1,3)$ on the graph of f.
	(a) Graph f and label point P.
	(b) Estimate the slope of the curve at point $P(1,3)$. Draw the secant line through point P and the point you
	used to estimate the slope.
	(c) Describe how to obtain a better estimation for the slope at $P(1,3)$.
	(d) Estimate the area under the graph of f but above the x-axis.
2	Consider the function $f(u) = \sqrt{u}$ and the point $P(A 2)$ on the area h of f
2	Consider the function $f(x) = \sqrt{x}$ and the point $P(4,2)$ on the graph of f .
	(a) Graph f and label point P. (b) Γ (c) Γ
	(b) Estimate the slope of the curve at point $P(4,2)$. Draw the secant line through point P and the point you
	used to estimate the slope. $P(4.2)$
	(c) Describe how to obtain a better estimation for the slope at $P(4,2)$.
	(d) Estimate the area under the graph of f but above the x-axis from $x=0$ to $x=4$.
3	f(x) is a continuous functions with domain all real numbers. Selected values of $f(x)$ are given in the table
-	below:
	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
	f(x) -5 2 4 2 1 6
	a) Approximate the slope of $f(x)$ when $x = 0$.
	b) Approximate the area under the graph of $f(x)$ on the interval [-4,11].
	c) representation and an and the graph of f (w) on the intervent [1,1-].
4.	
	(a) Use the rectangles in each graph to approximate the area of the region.
	y y
	4 + N $4 + N$
	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
	(b) Describe how you can obtain a better approximation of the area of the shaded region.