Riemann Sums Worksheet

1) Find the left and right Riemann sums, midpoint sum, and trapezoidal sum for $y = x^2 - 2$ on $[2, 6]$ with 4 even subintervals.

2) The velocity of a particle at different times is given in the table below. Use the left and right Riemann sums, midpoint sum (2 partitions), and trapezoidal sum to approximate the position of the particle if the particle has an initial position of x = 4.

t	1	3	5	8	9
v(t)	0	2	8	12	22

True or False

3) The function f(x) is decreasing on the interval [1, 5]. The left Riemann sum to approximate the area under the curve is an overestimate.

4) The function g(x) is increasing on the interval [2, 4]. The right Riemann sum to approximate the area under the curve is an underestimate.