Name _____

• You have 20 minutes   • No calculators   • Show sufficient work

1. Fill in the missing information to show that the area between the x-axis and the graph of $f(x) = x^2 + 10$ on the interval $[2, 6]$ can be expressed as the limit of a right Riemann sum. The only variables appearing in your limit should be n and k. Do not evaluate this limit.

$$AREA = \lim_{n \to \infty} \sum_{k=1}^{n} \left[\right]$$

2. Find a formula for $f(x)$ given that $f'(x) = \frac{5}{1+x^2} + \frac{1}{x}$, and $f(1) = ln(1)$.