HOMEWORK 10

Exercise 1. Let $f, g : [a, b] \to \mathbb{R}$ be two functions continuous on $[a, b]$ and differentiable on (a, b). Show that there exists $x \in (a, b)$ such that

$$f'(x)\big[g(b) - g(a)\big] = g'(x)\big[f(b) - f(a)\big].$$

Exercise 2. Solve exercises 32.3, 32.6, 32.7, and 32.8 from the textbook.