

This is a virtual assignment; that is, it won't be collected. However, I will pass out solutions on Friday. The purpose is to treat the material at the end of the semester in some way like the rest of the course.

1. – 29.9 (ungraded).

2. – 29.13 (ungraded).

3. – 29.14.

4. – 32.2.

5. – 33.4.

6. – 33.8.

7. – 34.2.

8. – 34.6.

9. – 29.18.

10. – 34.10. More generally, but with the same proof, show that if f is a strictly increasing continuous function which maps the interval $[0, a]$ onto the interval $[0, b]$ ($a, b > 0, f(a) = b$), then

$$\int_0^a f(x) \, dx + \int_0^b f^{-1}(x) \, dx = ab.$$

When done correctly, the proof requires no words.