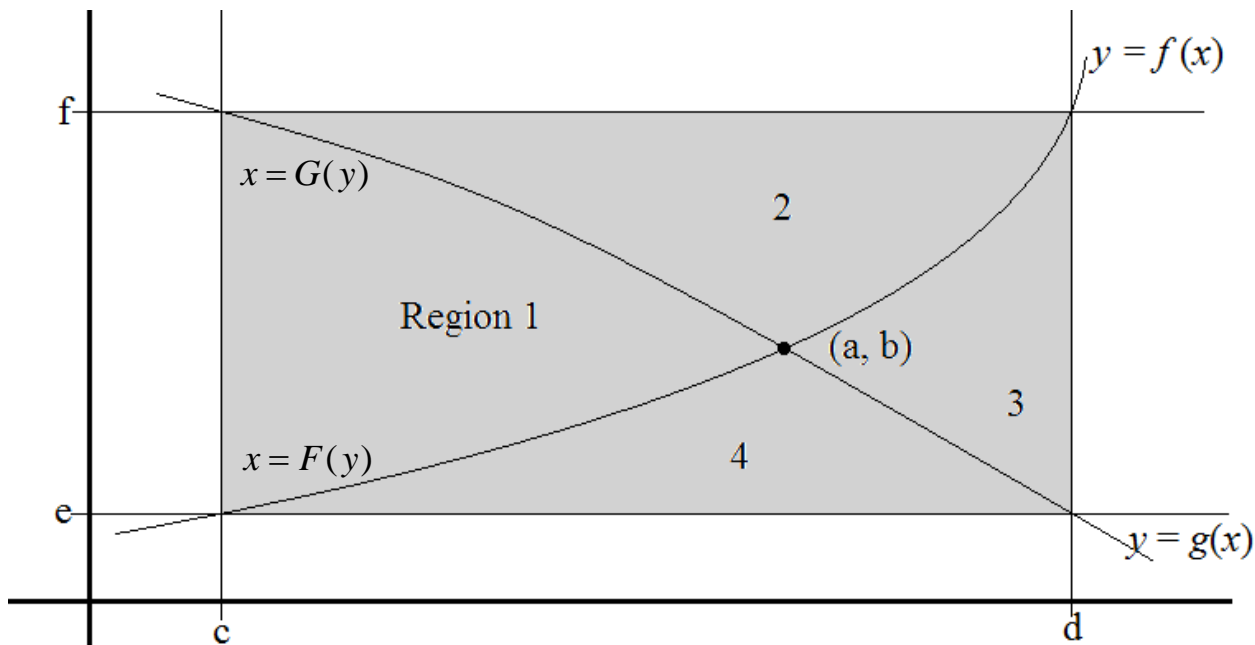


## Setting Up Area Integrals: Practice



Error Analysis: Someone made a mistake in setting up the integrals below! Explain why each of the following integrals will NOT find the area of the specified region.

1. Region 1:  $\int_a^c g(x) - f(x) dx$

2. Region 2:  $\int_c^d F(y) - G(y) dy$

3. Region 3:  $\int_a^d g(x) - f(x) dx$

4. Region 4:  $\int_c^d f(x) - e dx$

Matching Integrals to Areas: Match each of the following integrals to a region having that area.

5.  $\int_c^a f(x) - e dx + \int_a^d g(x) - e dx$

6.  $\int_b^f F(y) - G(y) dy$

7.  $\int_e^b G(y) - F(y) dy$

8.  $\int_c^a f - g(x) dx + \int_a^d f - f(x) dx$

9.  $\int_e^b F(y) - c dy + \int_b^f G(y) - c dy$

10.  $\int_a^d f(x) - g(x) dx$

11.  $\int_e^b d - G(y) dy + \int_b^f d - F(y) dy$

12.  $\int_c^a g(x) - f(x) dx$

13.  $\int_c^d g(x) - e dx - \int_c^a g(x) - f(x) dx$

14.  $\int_c^d f - g(x) dx - \int_a^d f(x) - g(x) dx$

15.  $\int_c^d f(x) - e dx - \int_e^b G(y) - F(y) dy$

16.  $\int_c^d f - f(x) dx - \int_b^f F(y) - G(y) dy$