

## Day 1 Answers

### Area/Volume #1

- a. 2.004
- b. 1.283
- c. -3.812 (or -3.811)

### Area/Volume #2

- a. 98.868 (or 98.867)
- b. 3.574 (or 3.573)
- c.  $\int_0^k (4-f(x))dx = \int_k^{2.3} (4-f(x))dx$

### Area/Volume #3

- a.  $\frac{16}{\pi} - \frac{4}{3}$
- b.  $\pi \int_0^2 [(4-f(x))^2 - (4-g(x))^2] dx$
- c.  $\int_0^2 [g(x)-f(x)]^2 dx$

### Area/Volume #4

- a.  $y-1 = 6\left(x - \frac{1}{2}\right)$
- b.  $-\frac{1}{8} + \frac{1}{\pi}$
- c.  $\pi \int_0^{\frac{1}{2}} ((1-f(x))^2 - (1-g(x))^2) dx$

### Area/Volume #5

- a.  $\frac{109}{60}$
- b.  $\frac{2209\pi}{40}$
- c.  $-\frac{2}{3}$

### Multiple Choice (Limits practice and start of Derivatives)

- |      |       |
|------|-------|
| 1. B | 6. D  |
| 2. D | 7. E  |
| 3. D | 8. E  |
| 4. E | 9. A  |
| 5. D | 10. A |