

## EMCF 37

- Find the area of the region between the graph of  $y = x - x^2$  and the  $x$ -axis over the interval  $[-1, 2]$ . **Give the answer that is closest to the actual value.**
  - 1.64
  - 1.74
  - 1.83
  - 1.93
- Find the area of the region bounded by the graph of  $y = x - x^2$  and the  $x$ -axis. **Give the answer that is closest to the actual value.**
  - .133
  - .167
  - .188
  - .222
- Find the area of the region bounded between the graphs of  $y = x^2$  and  $y = x + 2$ . **Give the answer that is closest to the actual value.**
  - 4.50
  - 4.67
  - 4.88
  - 4.90
- Find the average value of the function  $f(x) = \sqrt{x}$  on the interval  $[1, 4]$ . **Give the answer that is closest to the actual value.**
  - 1.125
  - 1.167
  - 1.225
  - 1.367
- Give the value of  $c$  that satisfies the conclusion of the mean value theorem for integrals for the function and interval given in problem 4. **Give the answer that is closest to the actual value.**
  - 1.361
  - 1.422
  - 1.575
  - 1.625

6. Find the area of the region bounded by the graphs of  $x + y = 2$  and  $x = y^2$ . **Give the answer that is closest to the actual value.**
- 4.50
  - 4.67
  - 4.88
  - 4.90
7. Suppose  $F''(x) = x + \cos(2x)$ ,  $F'(0) = 3$  and  $F(0) = 1$ . Give  $F(1)$ . **Give the answer that is closest to the actual value.**
- 4.52
  - 5.10
  - 6.34
  - 7.25
8. Give the volume generated when the region bounded by the graphs of  $y = \sqrt{x}$  and  $y = x^2$  is rotated around the  $x$ -axis. **Give the answer that is closest to the actual value.**
- .7924
  - .8163
  - .8732
  - .9425
9. Give the volume that is generated when the region bounded between  $y = \sqrt{x}$  and  $y = x^2$  is rotated around the line  $y = 3$ . **Give the answer that is closest to the actual value.**
- 5.23
  - 5.13
  - 5.07
  - 4.92
10. Give the volume that is generated when the region bounded between  $y = \sqrt{x}$  and  $y = x^2$  is rotated around the line  $y = -2$ . **Give the answer that is closest to the actual value.**
- 5.23
  - 5.13
  - 5.07
  - 4.92