MA 126 — Fall 2016 — Prof. Clontz — Quiz

Name: _____

Choose D for "None of these"

24. Which of these integrals is the area of the cardioid $r = 4 + 4\sin\theta$?

    A. $\int_0^{2\pi}(8 + 16\sin\theta + 8\sin^2\theta)\,d\theta$

    B. $\int_0^{\pi/2}(16 + 16\sin^2\theta)\,d\theta$

    C. $\int_0^{\pi} 6\sin^2\theta\,d\theta$

25. Which of these integrals is the length of the curve $r = \cos^2\theta$ where $0 \leq \theta \leq \pi/2$?

    A. $\int_0^{\pi/2} 4\sin\theta\sqrt{1-\cos^2\theta}\,d\theta$

    B. $\int_0^{\pi/2}(\cos^4\theta - \pi)\,d\theta$

    C. $\int_0^{\pi/2} \cos\theta\sqrt{1+3\sin^2\theta}\,d\theta$