

Tag : Calc1B.22-23.SampleTest2_Answers

Course : **Calculus 1B**

Duration : 2 hours

Answers to the questions of Sample Test 2

1. a. 9π
b. -3π

2. $\frac{2x}{1 + \cos^2(-x^2)}$ or equivalently $\frac{2x}{1 + \cos^2(x^2)}$
(Recall that \cos is an even function, that is, $\cos(\theta) = \cos(-\theta)$ for every $\theta \in \mathbb{R}$.)

3. $e^{2x}(2x^2 - 2x + 1) + C$

4. 1

5. The correct answer is G.

6. a. Slope field D
b. $y(x) = \tan\left(\frac{1}{3}x^3 + C\right)$

7. $P_3(x) = \frac{1}{\pi} - \frac{1}{\pi^2}x + \frac{1}{\pi^3}x^2 - \frac{1}{\pi^4}x^3$

8. $|w| = 16$ and $\arg(w) = \frac{\pi}{3}$

9. $z_0 = \frac{3}{2} + i\left(\frac{3}{2}\sqrt{3} + 1\right)$, $z_1 = -3 + i$, $z_2 = -\frac{3}{2} + i\left(-\frac{3}{2}\sqrt{3} + 1\right)$

10. $y(x) = \frac{3}{2}e^{-2x} + 4xe^{-2x} - \frac{1}{2}\cos(2x)$