

Tag : Calc1B.22-23.SampleTest1\_Answers

Course : **Calculus 1B**

Duration : 2 hours

### Answers to the questions of Sample Test 1

1. The correct answer is F.

2.  $2 \ln(1 + 4x^2)$

3.  $\frac{\pi^2}{8}$

4.  $2\pi$

5. a.  $-3 < x < 3$

b.  $\frac{3x}{3+x}$

(Note: your answer should be simplified as much as possible; in particular, there should be no fractions in the enumerator or denominator.)

6.  $y(x) = \frac{\sin x + \pi^2}{x^2}$

7.  $P_3(x) = \ln 2 - \frac{1}{2}(x+1) - \frac{1}{8}(x+1)^2 - \frac{1}{24}(x+1)^3$

(Note: Do *not* expand the brackets.)

8. The correct answer is D.

9.  $z_1 = e^{i\frac{\pi}{3}}, \quad z_2 = e^{i\pi} (= -1), \quad z_3 = e^{i\frac{5\pi}{3}},$   
 $z_4 = \sqrt[3]{3} e^{i\frac{2\pi}{3}}, \quad z_5 = \sqrt[3]{3} e^{i\frac{4\pi}{3}}, \quad z_6 = \sqrt[3]{3} e^{i2\pi} (= \sqrt[3]{3})$

10.  $y(x) = -e^x + xe^x$