MATH-1150 (DUPRÉ) FALL 2013 TEST 1 ANSWERS

DATE: WEDNESDAY 18 SEPTEMBER 2013

1. PRINT YOUR LAST NAME IN LARGE **CAPITAL LETTERS ON THE UPPER RIGHT CORNER OF EACH SHEET TURNED IN.**

2. PRINT YOUR FIRST NAME IN CAPITAL LETTERS DIRECTLY UNDERNEATH YOUR LAST NAME ON EACH SHEET TURNED IN.

3. WRITE YOUR CORRECT SECTION NUMBER DIRECTLY UNDER YOUR FIRST NAME.

CIRCLE THE VALUE OF THE INDICATED LIMITS.

4. $\lim\limits_{x \to 2}[3x^2 - 5x + 3] =$

[**A**] 2
[**B**] 5
[**C**] 6
[**D**] 8
[**E**] NONE OF THE ABOVE

CORRECT ANSWER: B

5. $\lim\limits_{x \to 3} \dfrac{x^2 - 9}{x - 3} =$

[**A**] 2
[**B**] 5
[**C**] 6
[**D**] 8
[**E**] NONE OF THE ABOVE

CORRECT ANSWER: C

6. $\lim\limits_{x \to 1} \dfrac{2x^2 + 6x - 8}{x^2 - 1} =$

[**A**] 2
[**B**] 5
[**C**] 6
[**D**] 8
[**E**] NONE OF THE ABOVE

CORRECT ANSWER: B

Suppose that f is the function with domain $[2, 9]$ and rule given by $f(x) = x^2 + 16$, and that g is the function with domain $[3, 99]$ and rule given by $g(x) = \sqrt{4 + x}$. **Choose the answer with the same value, in each of the following problems.**

7. $(g \circ f)(4) =$

[**A**] 2
[**B**] 5
[**C**] 6
[**D**] 8
[**E**] NONE OF THE ABOVE

CORRECT ANSWER: C

8. $(f - g)(3) =$

[**A**] 25
[**B**] $25 + \sqrt{7}$
[**C**] 24
[**D**] $25 - \sqrt{7}$
[**E**] NONE OF THE ABOVE

CORRECT ANSWER: D

9. $([f - 16] \cdot g)(5) =$

[**A**] 75
[**B**] $(25 + 16)(3)$
[**C**] $(25 - 16)(3)$
[**D**] $25 - \sqrt{7}$
[**E**] NONE OF THE ABOVE

CORRECT ANSWER: A

10. $\left(\dfrac{f}{g}\right)(5) =$

[**A**] $\dfrac{g(5)}{f(5)}$

[**B**] $\dfrac{25 + 16}{3}$

[**C**] $\dfrac{25 + 16}{9}$

[**D**] $\dfrac{3}{25 + 16}$

[**E**] NONE OF THE ABOVE

CORRECT ANSWER: B