

MATH 425

Quiz 2

1. $\lim_{x \rightarrow 1^-} (0 + 1) = 1$

2. $\lim_{x \rightarrow 1^+} (2 + 1) = 3$

3. $\lim_{x \rightarrow 1} (\text{DNE} + 1) = \text{DNE}$, $\lim_{x \rightarrow 1} (f(x)) = \text{DNE}$

4. $\lim_{x \rightarrow 2^-} (1 / x^2) = 1/2$

5. $\lim_{x \rightarrow 3^+} (2 \cdot 1) = 2$

6. $\lim_{x \rightarrow 4} (1 - 2) = -1$

7. Jump discontinuity. $\lim_{x \rightarrow 1^-} (f(x)) = 0$ and $\lim_{x \rightarrow 1^+} (f(x)) = 2$

8. Removable discontinuity. $\lim_{x \rightarrow 1} (f(x)) = 1$ but $f(1) \neq 1$

9. False, $\lim_{x \rightarrow 3^-} (f(x)) = 0$ but $f(3) \neq 0$

10. True, $\lim_{x \rightarrow 3^+} (g(x)) = 1$ and $g(3) = 1$