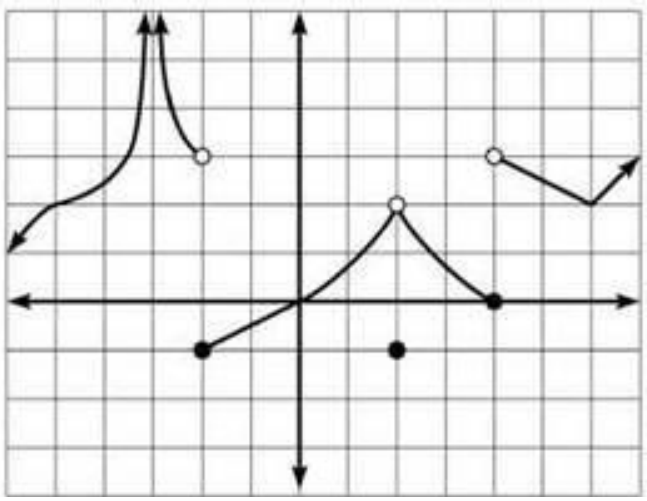
Calculus I | Section 2.2 Quiz Review

Name: _____ Period: _____

1–10: Use the graph of f(x) to evaluate each expression. If a limit does not exist, write "DNE."



1. $f(x) =$

2. $f(x) =$

3. $f(x) =$

4. $f(x) =$

5. $f(x) =$

6. $f(x) =$

7. $f(2) =$

8. $f(x) =$

9. $f(x) =$

10. $f(4) =$

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Name: _____ Period: _____

11–16: Use the graph of f(x) to evaluate each limit. If a limit does not exist, write "DNE."

11. $f(x) \;=$

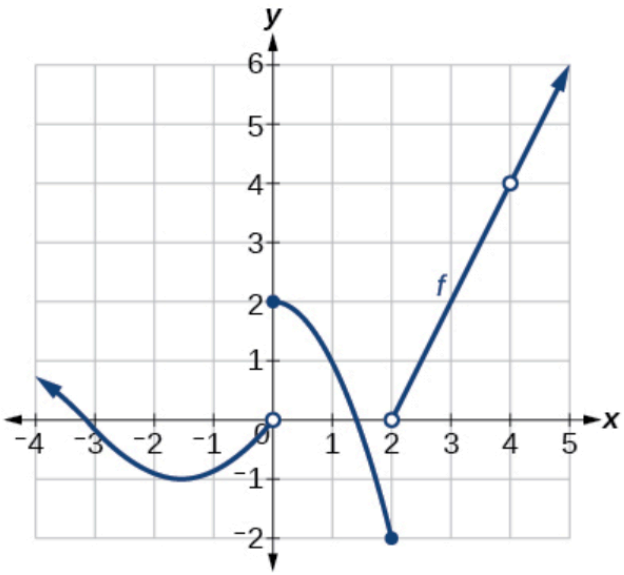
12. $f(x) \;=$

13. $f(x) \;=$

14. $f(x) \;=$

15. $f(x) \;=$

16. $f(x) \;=$

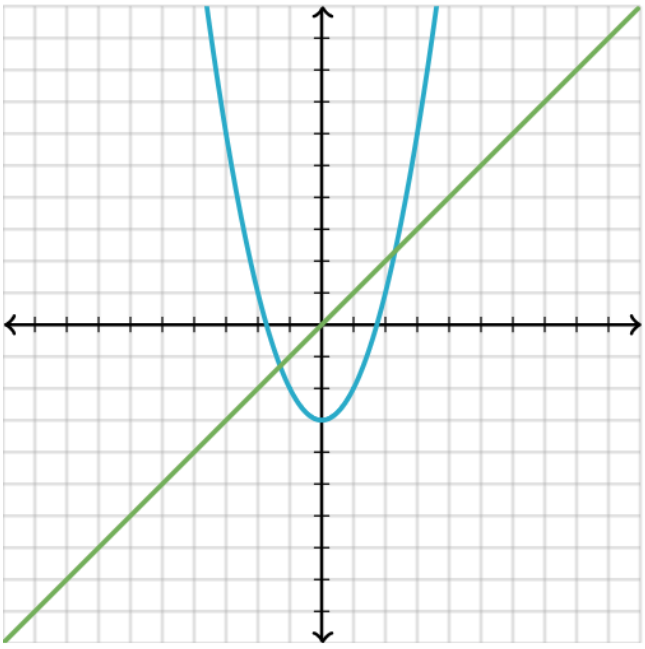


17–19: Use the graphs of f(x) and g(x) to evaluate each limit. If a limit does not exist, write "DNE."

17. $[f(x) - g(x)] \;=$

18. $[\frac{-2g(x)}{f(x)}] \;=$

19. $[f(x) \cdot g(x)] \;=$



Each grid interval represents 1 unit.

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20–41: Find each limit algebraically. Simplify all answers and leave in fractional form where applicable. Show all work using proper limit notation.

20. (x)

21. (8)

22. $(3x^3 - 2x^2 + 5x + 4)$

23. $(4x^2 - 2x + 12)$

24. $(\frac{-1}{2}x^2 + 2x + 4)$

25. $\frac{x-4}{x^2-6x+8}$

26. $\frac{-x-3}{x^2+x+1}$

27. $\frac{27+x^3}{x^2+7x+12}$

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20–41: Find each limit algebraically. Simplify all answers and leave in fractional form where applicable. Show all work using proper limit notation.

28. $\frac{12x^5 - 45x^2}{3x^3 + 9x^2}$

29. $\frac{2x^3 - 8x^2 + 8x - 32}{5x^3 - 20x^2}$

30. $\frac{2x^2 + 11x - 21}{x^2 - 49}$

31. $\frac{25 - x^2}{125 + x^3}$

32. $sin(x)$

33. $cos(x)$

34. $[2\ sin(x)\ -\ 3\ cos(x)]$

35. $[4\ cos(x)\ +\ tan(x)]$

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Name: _____ Period: _____

20–41: Find each limit algebraically. Simplify all answers and leave in fractional form where applicable. Show all work using proper limit notation.

36. $\frac{cos(x)-1}{sin(x)}$

37. $\frac{3+sin(x)}{2\,cos(x)}$

38. $\frac{x-5}{\sqrt{x+4}-3}$

39. $\frac{\sqrt{x+1}-1}{x}$

40. $\frac{4-x}{5-\sqrt{x^2+9}}$

41. $\frac{\sqrt{x+4}-\sqrt{3}}{x+1}$

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Name: _____ Period: _____

42. Find the approximate value of $\frac{2x^2+x}{sin(x)}$ by making a table.

Make sure your calculator is in radians mode!

x	−0.1	−0.01	−0.001	0	0.001	0.01	0.1
f(x)							

$\frac{2x^2+x}{sin(x)}$ = _____

43. Find the approximate value of $\frac{x+1}{x^2-x-2}$ by making a table.

x							
f(x)							

$\frac{x+1}{x^2-x-2}$ = _____