Calculus I Section 1.2 Homework

1) Complete the following tables:

$f(x) =$ _____ (see textbook)

a)

x	3	3.5	3.9	3.999	3.9999999
$f(x)$					

b)

x	5	4.5	4.01	4.0001	4.00000001
$f(x)$					

c) $\lim_{x\to 4^-} f(x) =$ _____ $\lim_{x\to 4^+} f(x) =$ _____ $\lim_{x\to 4} f(x) =$ _____

3) Complete the following tables:

$f(x) =$ _____ (see textbook)

a)

x	-1	-0.5	-0.1	-0.0001	-0.0000001
$f(x)$					

b)

x	1	0.5	0.1	0.0001	0.00000001
$f(x)$					

c) $\lim_{x\to 0^-} f(x) =$ _____ $\lim_{x\to 0^+} f(x) =$ _____ $\lim_{x\to 0} f(x) =$ _____

5) Complete the following tables:

$f(x) =$ _____ (see textbook)

a)

x	-1	-0.5	-0.1	-0.0001	-0.0000001
$f(x)$					

b)

x	1	0.5	0.1	0.0001	0.00000001
$f(x)$					

c) $\lim_{x\to 0^-} f(x) =$ _____ $\lim_{x\to 0^+} f(x) =$ _____ $\lim_{x\to 0} f(x) =$ _____

7) Complete the following tables:

$f(x) =$ _____ (see textbook)

a)

x	0	0.5	0.9	0.999	0.999999
$f(x)$					

b)

x	2	1.5	1.1	1.0001	1.00000001
$f(x)$					

c) $\lim_{x\to 1^-} f(x) =$ _____ $\lim_{x\to 1^+} f(x) =$ _____ $\lim_{x\to 1} f(x) =$ _____

11) Complete the following tables:

$f(x) =$ _____ (see textbook)

a)

x	-7	-6.5	-6.01	-6.0001	-6.00000001
$f(x)$					

b)

x	-5	-5.5	-5.9	-5.999	-5.999999
$f(x)$					

c) $\lim_{x\to -6^-} f(x) =$ _____ $\lim_{x\to -6^+} f(x) =$ _____ $\lim_{x\to -6} f(x) =$ _____

17) Complete the following tables:

$f(x) =$ _____ (see textbook)

a)

x	1	1.5	1.9	1.999	1.999999
$f(x)$					

b)

x	3	2.5	2.01	2.0001	2.00000001
$f(x)$					

c) $\lim_{x\to 2^-} f(x) =$ _____ $\lim_{x\to 2^+} f(x) =$ _____ $\lim_{x\to 2} f(x) =$ _____

19) Complete the following tables:

$f(x) =$ _____ (see textbook)

a)

x	1	1.5	1.9	1.999	1.999999
$f(x)$					

b)

x	3	2.5	2.01	2.0001	2.00000001
$f(x)$					

c) $\lim_{x\to 2^-} f(x) =$ _____ $\lim_{x\to 2^+} f(x) =$ _____ $\lim_{x\to 2} f(x) =$ _____

22) Complete the following tables:

$f(x) =$ _____ (see textbook)

a)

x	$\pi/2$-0.5	$\pi/2$-0.1	$\pi/2$-0.0001	$\pi/2$-0.0000001
$f(x)$				

b)

x	$\pi/2$+0.5	$\pi/2$+0.1	$\pi/2$+0.0001	$\pi/2$+0.0000001
$f(x)$				

c) $\lim_{x\to \pi/2^-} f(x) =$ _____ $\lim_{x\to \pi/2^+} f(x) =$ _____ $\lim_{x\to \pi/2} f(x) =$ _____

24)

a) $f(-2) =$ _____ Hint: when x = -2, y = ?

b) $\lim_{x\to -2^-} f(x) =$ _____ $\lim_{x\to -2^+} f(x) =$ _____ $\lim_{x\to -2} f(x) =$ _____

c) $f(0) =$ _____ Hint: when x = 0, y = ?

d) $\lim_{x\to 0^-} f(x) =$ _____ $\lim_{x\to 0^+} f(x) =$ _____ $\lim_{x\to 0} f(x) =$ _____

e) $f(2) =$ _____ Hint: when x = 2, y = ?

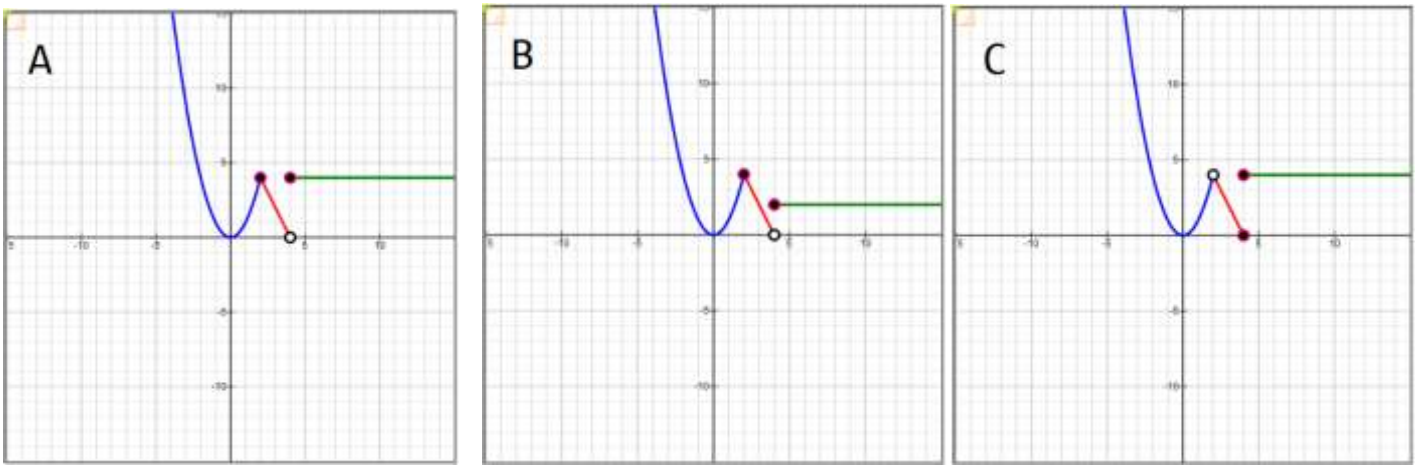
f) $\lim_{x\to 2^-} f(x) =$ _____ $\lim_{x\to 2^+} f(x) =$ _____ $\lim_{x\to 2} f(x) =$ _____

g) $f(4) =$ _____ Hint: when x = 4, y = ?

h) $\lim_{x\to 4^-} f(x) =$ _____ $\lim_{x\to 4^+} f(x) =$ _____ $\lim_{x\to 4} f(x) =$ _____

25) Identify graph.

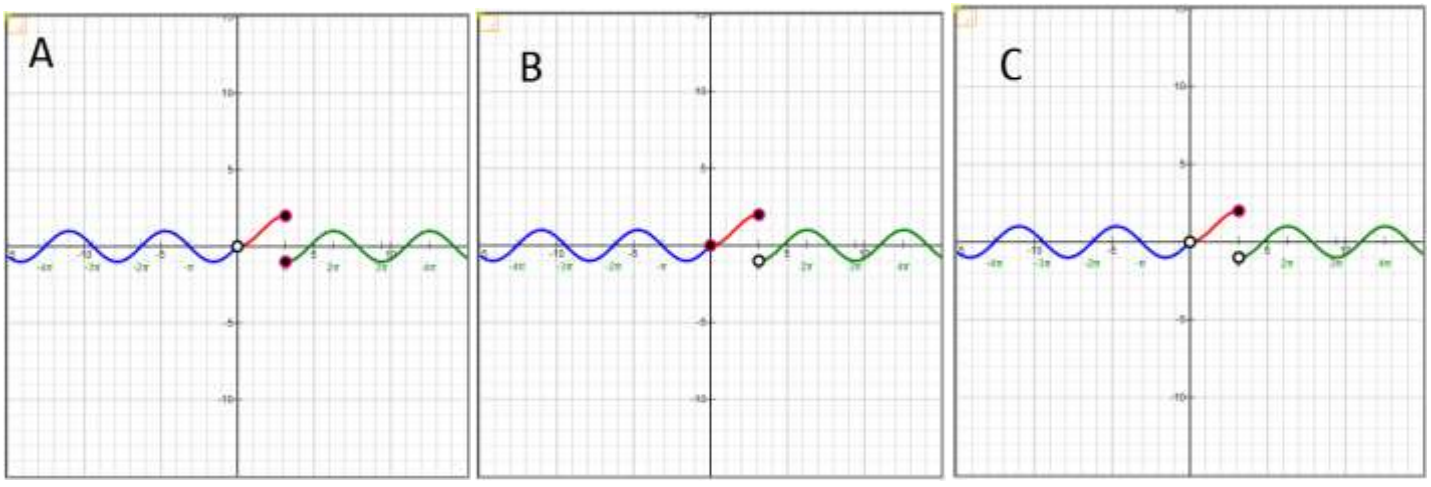
$$f(x) = \begin{cases} \_\_\_\_\_ \\ \_\_\_\_\_ \\ \_\_\_\_\_ \end{cases}$$ (see textbook)



Which graph is correct?

26) Identify graph.

$$f(x) = \begin{cases} \_\_\_\_\_ \\ \_\_\_\_\_ \\ \_\_\_\_\_ \end{cases}$$ (see textbook)



Which graph is correct?