Name: _____ Date: _____ Row: _____ Period: _____

NOTES SECTION 2.3: CALCULATING LIMITS USING THE LIMIT LAWS

LIMIT LAWS

Suppose that c is a constant and the limits $\lim_{x\to a} f(x)$ and $\lim_{x\to a} g(x)$ exist. Then

1) $\lim_{x\to a}\left[f(x)+g(x)\right]=$

2) $\lim_{x\to a}\left[f(x)-g(x)\right]=$

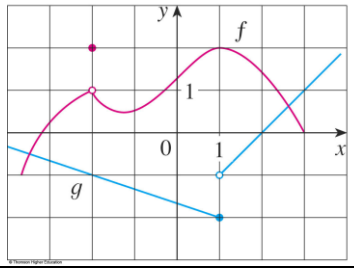
3) $\lim_{x\to a}\left[cf(x)\right]=$

4) $\lim_{x\to a}\left[f(x)g(x)\right]=$

5) $\lim_{x\to a}\left[\dfrac{f(x)}{g(x)}\right]=$

EXAMPLE 1

Use the Limit Laws and the graphs of f and g to evaluate the following limits, if they exist.



a)

b)

c)

LIMIT LAWS

6)

7)

8)

9)

10)	11)

EXAMPLE 2
Evaluate the following limits and justify each step.

a)	b)

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EXAMPLE 3

EXAMPLE 4

EXAMPLE 5	**EXAMPLE 6**