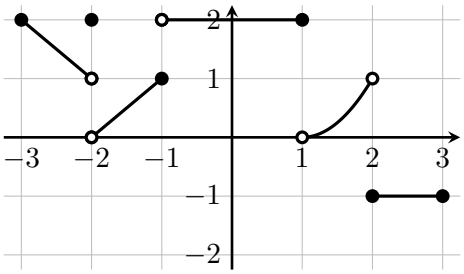
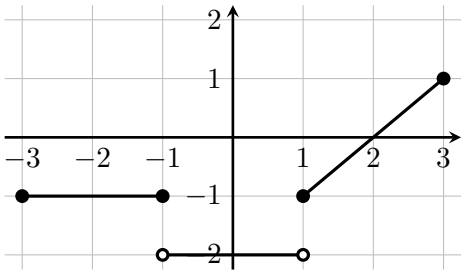
Wacky Limits **Name:** _____

These limits are wacky. Help me understand the key. All I have is the answers and not the reasons why the answers are what they are. Do this by providing the correct mathematical reasons/work explaining how one gets the correct answer.

Graph of f



Graph of g



1. $\lim_{x\to 0}(f(x)+g(x))$= 0

2. $\lim_{x\to 2^-}\frac{g(x)}{f(x)} = \lim_{x\to 2^+}\frac{g(x)}{f(x)} = \lim_{x\to 2}\frac{g(x)}{f(x)}$= 0

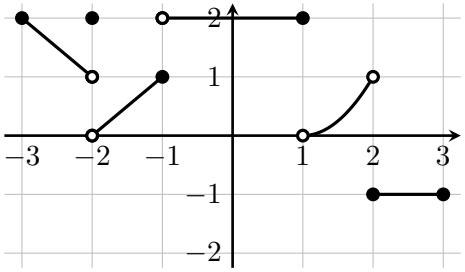
3. $\lim_{x\to -1}(f(x)+g(x))$= 0

4. $\lim_{x\to -1}\frac{f(x)}{g(x)}$= −1

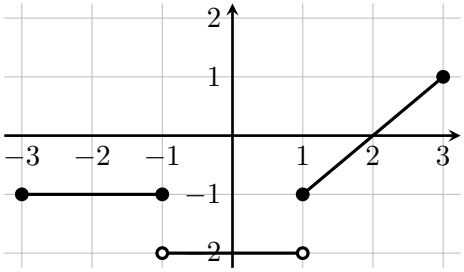
5. $\lim_{x\to 2}(f(x)g(x))$= 0

6. $\lim_{x\to 3^-} f(g(x))$= 2

Graph of f



Graph of g



7. $\lim_{x \to 1^+} f(g(x)) = 2$

8. $\lim_{x \to -2^-} g(f(x)) = -1$ (and NOT -2)

9. $\lim_{x \to 1^-} f(g(x)) = 2$ (and NOT 1)

10. $\lim_{x \to 2^-} \dfrac{f(x)}{g(x)} = -\infty$

11. $\lim_{x \to 2^+} \dfrac{f(x)}{g(x)} = -\infty$

12. $\lim_{x \to 2} \dfrac{f(x)}{g(x)} = -\infty$