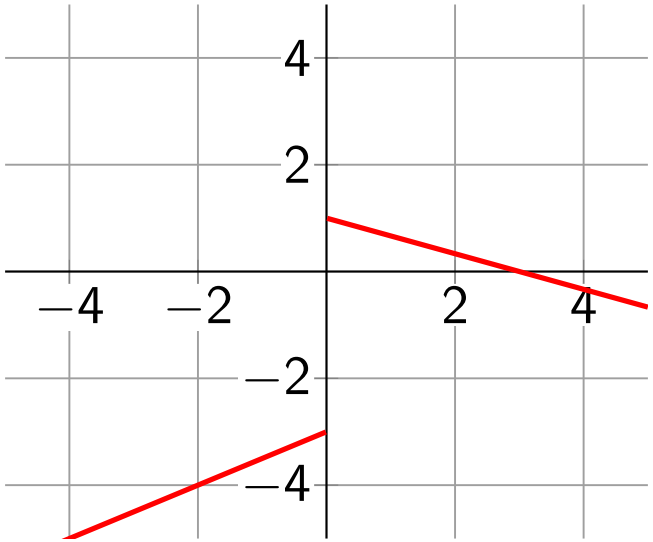
Bellwork 8/22 (5 Minutes)

[Piecewise-Defined Functions]



Find a piecewise formula of this graph.

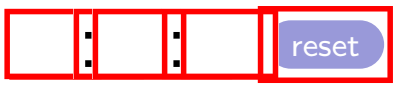
reset

Exercise

For each function, evaluate:

$$\frac{f(a+h)-f(a)}{h}$$

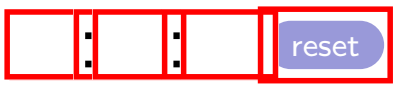
1. $f(x) = x^2 + 3x$
2. $f(x) = x + 2$
3. $f(x) = 2x$



Exercise

Rewrite each function as a piecewise-defined one:

1. $f(x) = -|x + 2| - 3$
2. $g(x) = |1 - x|$
3. $h(x) = 1 - |x|$



Exercise

Determine whether each function is even, odd, or neither. Explain your reasoning.

1. $f(x) = x^4 + x^2$
2. $g(x) = -x^2 + x$
3. $h(x) = 2x^3 + x$