4.1 Some of This, Some of That
A Develop Understanding Task

Part I: Connect context and graphical representations

1. Create a story that matches the graph below. Label axes and be as specific as possible in describing what is happening to connect your story to the graph.

2. If you were to write a function to match each part of your story (or section of the graph), how many would you write? Explain.
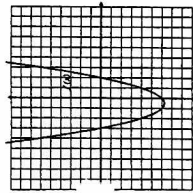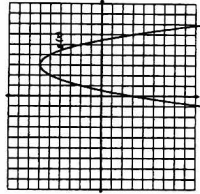
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4.1

Name _____

Period _____ Date _____

READY

Topic: Reading function values in a piece-wise defined graph.
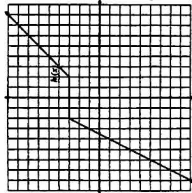
Use the graph to find the indicated function value.

1a. $f(-3) =$
"when $x=-3$, $y=?$"

b. $f(-2) =$
"when $x=-2$, $y=?$"

c. $f(0) =$

d. $f(2) =$
"when $x=0$, $y=?$"
"when $x>2$, $y=?$"

2a. $g(0) =$

b. $g(2) =$

c. $g(3) =$

d. $g(5) =$

3a. $h(-4) =$

b. $h(0) =$

c. $h(2) =$

d. $h(4) =$
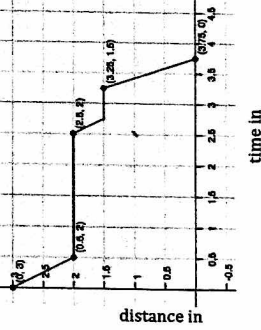

4a. $r(-3) =$

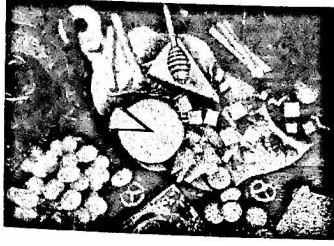b. $r(-1) =$

c. $r(0) =$

d. $r(5) =$
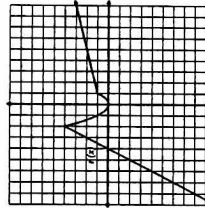
5. Isaac lives 3 miles away from his school. School ended at 3 pm and Isaac began his walk home with his friend Tate who lives 1 mile away from the school, in the direction of Isaac's house. Isaac stayed at Tate's house for a while and then started home. On the way he stopped at the library. Then he hurried home. The graph at the right is a **piece-wise defined function** that shows Isaac's distance from home during the time it took him to arrive home.

a. How much time passed between school ending and Isaac's arrival home?

b. How long did Isaac stay at Tate's house?

c. How far is the library from Isaac's house?

d. Where was Isaac, 3 hours after school ended?

e. Use function notation to write a mathematical expression that says the same thing as question d.

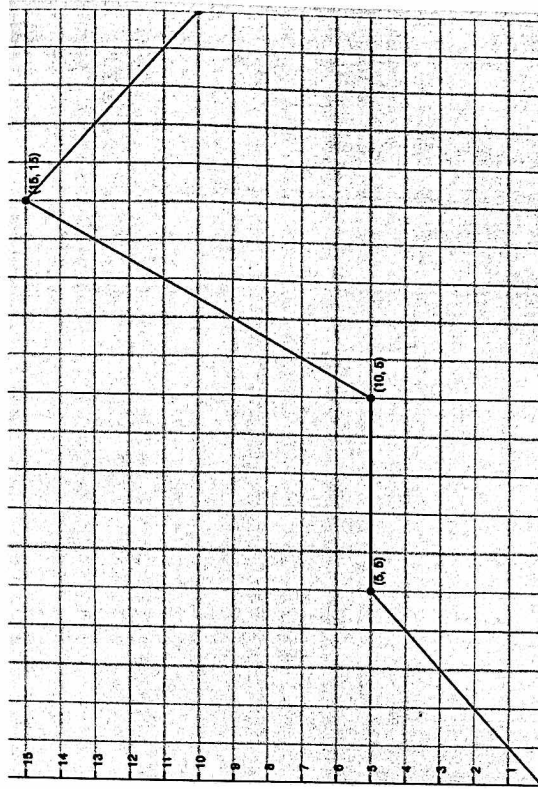f. When was Isaac walking the fastest? How fast was he walking?

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