

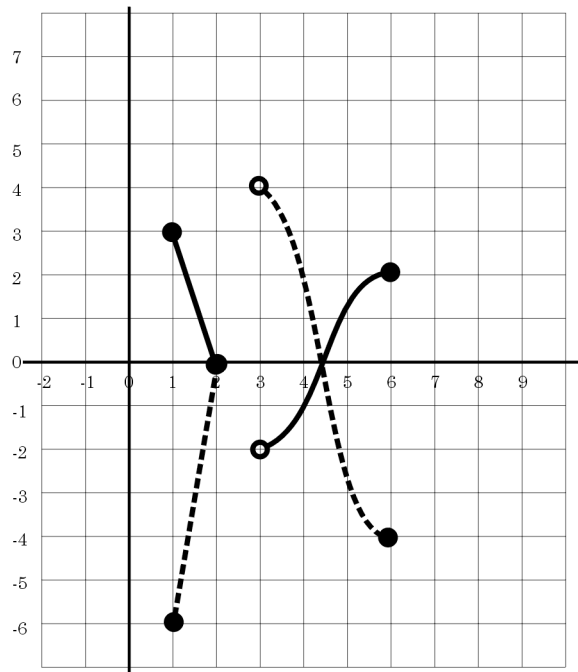
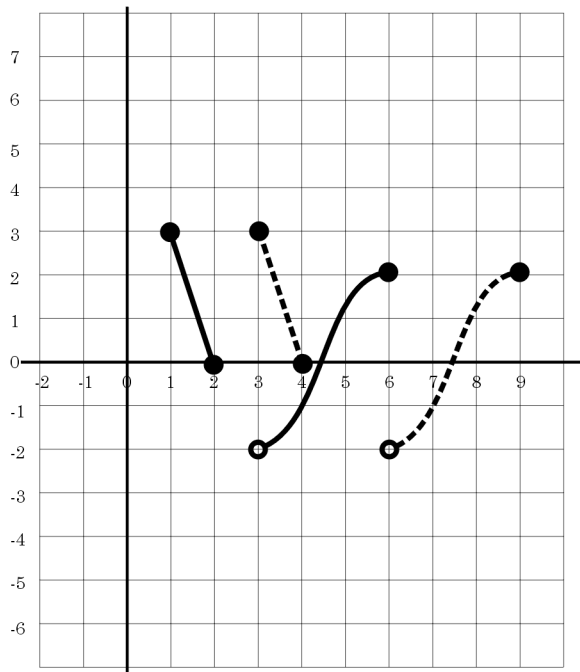
**Quiz 01 version B Suggested Solutions:** The suggested solutions have **boxes** around them.

1. Consider the function  $g(t)$  whose *entire* graph is shown below. (There are TWO copies; you'll need both of them in part 1C.) Find the following: Use correct interval notations for the domain and range. You might need a "union" sign somewhere such as in " $(15, 20] \cup (35, \infty)$ ".

1A The domain of  $g(t)$ ?  $[1, 2] \cup (3, 6]$       The range of  $g(t)$ ?  $(-2, 3]$       The  $x$ -intercept(s) of  $g(t)$ ?  $x = 2$  and  $x = 4.5$

1B. Find a good approximation to  $g'(4)$ . Sketch any appropriate tangent lines and show the numbers or points you used in your solution.

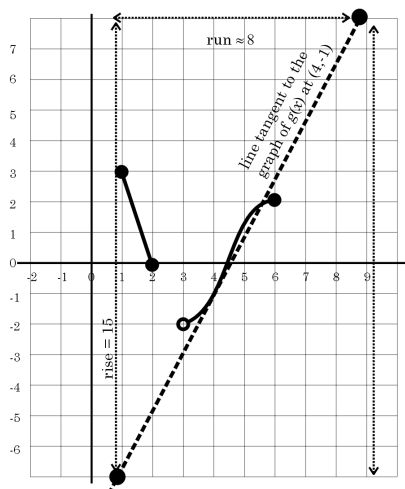
The tangent line is drawn on an additional plot added at the bottom of the quiz.  
Two "easy" points on that line are where it intersects the top and bottom of the grid, and they give a "rise/run" of about  $15/8$ , so we'll estimate  $g'(4)$  to be  $15/8$ , (which is  $1.875$ )



1C. On the axes above, make a good sketch of each of these two functions:

- (1) On the left-hand graph, draw  $g(x - 2)$       (2) On the right-hand graph, draw  $-2g(x)$

the two solutions are drawn using dashed lines on the two grids above.



WHAT?