

Quiz 1

Key

This is a two-stage quiz. You will be given this sheet of paper twice.

The first (colored) copy of the quiz corresponds with the first stage. Use your knowledge & calculator to take this quiz—no notes, books, internet resources, faculty, tutors or colleagues. You have 15 minutes.

The second (white) copy of the quiz corresponds with the second stage. You are now welcome to use your books, notes, and students in the class to retake the same quiz. You have 15 minutes to complete the quiz and to build one solution to be turned in (with everyone's name on top!).

Show *all* your work. Reasonable supporting work must be shown for any partial credit.

1. Use the graph of f , (on the right) to answer the following:

(a) [1] Estimate $f(2)$

≈ 1.5

(b) [1] Find the y intercept.

0

(c) [1] Estimate all x such that $f(x) = 2$.

$x = -2$ and 3

(d) [2] What is the range of f ? y values

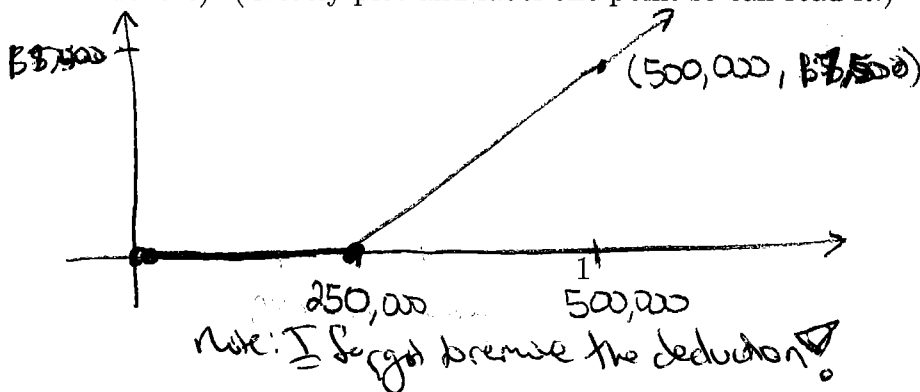
$[-2, 2]$

2. In May 2021 a new law in Washington State enacted a Capital Gains tax of 7% on all Capital Gains income over \$250,000.

(a) [2] Does this define a function? Why or why not?

yes - given \$ earned in Capital Gains you are one specific number of \$

(b) [3] Graph the tax owed (in dollars) as a function of Capital Gains earned (in dollars). (Clearly plot and label one point so can read it!)



rule 7% of \$500,000 is: $0.07 \cdot 500,000 = 35,000$
~~remove 250,000~~

point on graph axis labeled/stated got it