

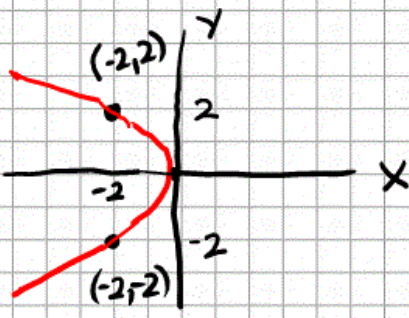
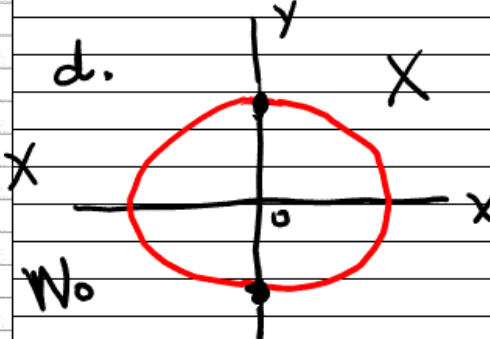
Name: _____ Page Number: 2
 Class: _____ Date: 1-31-13
 Topic/Section: _____

Examples and Vocabulary	Notes/Comments/Questions
d. Referring to a, fill in the blank: $a(-2) = \underline{3}$ $a(-2) = 4$ <u>Function</u> - A relation where each input is matched with exactly one output.	What makes a relation a function?

Name: _____ Page Number: 3
 Class: _____ Date: 1-31-13
 Topic/Section: _____

Examples and Vocabulary	Notes/Comments/Questions
② Which of the following relations is not a function? Explain. Yes a. $\begin{array}{c c c c c c} x & 0 & 1 & 2 & 3 & 4 \\ \hline y & 0 & 1 & 2 & 3 & 4 \end{array}$ Yes b. $\begin{array}{c c c c c c} x & 0 & 1 & 2 & 3 & 4 \\ \hline y & 4 & 4 & 4 & 4 & 4 \end{array}$ No c. $\begin{array}{c c c c c c} x & 0 & 1 & 2 & 2 & 4 \\ \hline y & 1 & 2 & 3 & 4 & 0 \end{array}$ Yes d. $\begin{array}{c c c c c c} x & 0 & 1 & 2 & 3 & 3 \\ \hline y & 3 & 2 & 1 & 0 & 0 \end{array}$	How do I determine if a table is a function or not?

Name: _____ Page Number: 4
 Class: _____ Date: 1-31-13
 Topic/Section: _____

Examples and Vocabulary	Notes/Comments/Questions
③ Which of the following relations is a function? Explain. a.  No, there is one input with two different outputs b.  Yes, each input matches exactly one output c.  Yes d.  No	Why is a graph of a set of points a relation? How do I determine if a graph is a function?

Name: _____ Page Number: 5
 Class: _____ Date: 1-31-13
 Topic/Section: _____

Examples and Vocabulary	Notes/Comments/Questions
<u>Function</u> - A rule that can be used to predict or determine an unknown quantity (called the <u>output</u> or <u>dependent quantity</u>) based on a known or measurable quantity (called the <u>input</u> or <u>independent quantity</u>). We say the output is a function of the input. Each input must result in one output. ④ Suppose you go to a grocery store to buy some oranges and the price is \$0.70 per pound.	

Name: _____ Page Number: 6
 Class: _____ Date: 1-31-13
 Topic/Section: _____

Examples and Vocabulary	Notes/Comments/Questions
a. What is the input? x = weight of the oranges ↑ input variable	
b. What is the output? y = cost of the oranges ↑ output variable	
c. What is the function rule? cost = $0.70 \times \text{weight}$ $y = 0.70x$ $y = f(x) = 0.70x$	
d. What output matches the input 3? $y = f(3) = 0.70 \cdot 3 = 2.10$	$y = 0.70 \cdot 3$ $y = 2.10$ $(3, 2.10)$ $(4, 2.80)$ $(5, 3.50)$

Name: _____ Page Number: 7
 Class: _____ Date: 1-31-13
 Topic/Section: _____

Examples and Vocabulary

Notes/Comments/Questions

e. What input(s) matches the output 105?

$$105 = f(x) = 0.70x$$

$$105 = 0.70x$$

$$150 = \frac{105}{0.70} = x$$

f. What is the domain?

domain = positive real numbers

g. Is the cost of the oranges a function of the number of oranges?

No

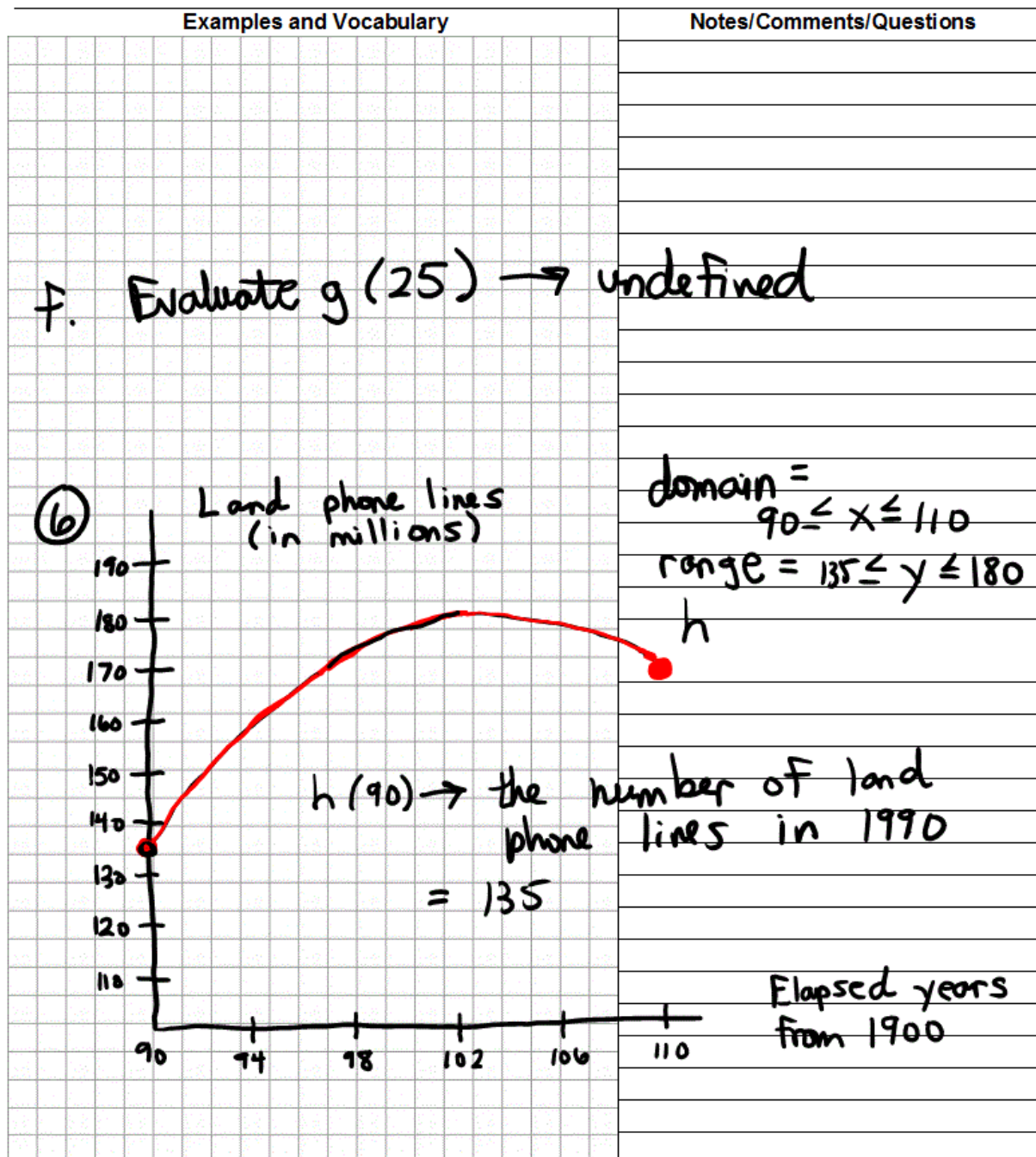
⑤ g

Number of hours worked	0	10	20	30	40
Maximum credit hours	16	13	10	7	4

Name: _____ Page Number: 8
 Class: _____ Date: 1-31-13
 Topic/Section: _____

Examples and Vocabulary	Notes/Comments/Questions
a. What is the input? x = number of hours worked	
b. What is the output? y = maximum credit hours	
c. What is the function rule? the table	
d. Interpret $g(30)$. → Evaluate $g(30) = 7$	"the output matches the input 30" "the maximum credit hours for a student working 30 hours"
e. Find x such that $g(x) = 16$. What does x mean? $x = 0$	

Name: _____ Page Number: 9
 Class: _____ Date: 1-31-13
 Topic/Section: _____



Name: _____ Page Number: 10
 Class: _____ Date: 1-31-13
 Topic/Section: _____

Examples and Vocabulary	Notes/Comments/Questions
a. What is the input? x = elapsed years from 1900	
b. What is the output? y = number of land phone lines	
c. What is the function rule? the graph	
d. Interpret and evaluate $h(90)$.	
e. What was the max. number of phone lines and when? 2002	
f. What is the domain? The range?	