



B.E. International Program

Faculty of Economics, Thammasat University



EE 320 Introductory Mathematical Economics (Section 046402)

Semester 1/2013

Practice Problem 2

1. Find the domain of the following functions

a) $f(x) = \frac{1}{2x+3}$

b) $g(x) = \sqrt{x^2 - 16}$

c) $y = e^{x+4}$

d) $y = \ln x - 4, x > 0$

2. Graph the following functions:

a) $y = \frac{15}{x}$

b) $y = x^2 + x - 2$

c) $y = |x + 5|$

d) $y = x^{-1/3}$

e) $y = 5 - x^3$

f) $y = x^3 - 2x^2 + x - 2$

3. Sketch the graph of the function g defined for all x by

$$g(x) = \begin{cases} |x + 3| & \text{if } x \leq 0 \\ 2x + 4 & \text{if } x > 0 \end{cases}$$

4. Which of the following equations are functions and why?

a) $y = -3x + 7$

b) $y^2 = x$

c) $y = -4x^2 + 7x - 2$

d) $x^2 + y^2 = 36$

5. Chiang & Wainwright: Exercise 2.4 Q. 8.

6. If the inflation rate is 5% per year, the equation $P(t) = P_0(1.05)^t$ yields the predicted price $P(t)$ after t years of an item that presently costs P_0 . What is predicted price of:

a) A dozen of eggs, presently costing 60 baht, after 5 years.

b) A 3,500,000 baht house after 4 years.