

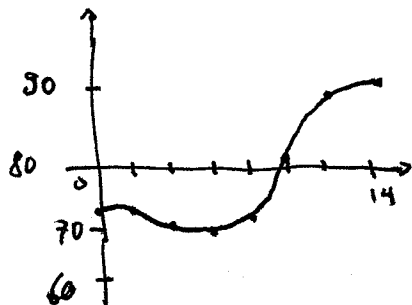
Math 1A - Lect. 3 - Fall 2010 - Harman
HW 1 Solutions

1.1 2(b) $x \in \{-2, 2\}$ (c) $x \approx -3$ or $x \approx 4$ (d) $[0, 4]$ (e) domain $[-4, 4]$, range $[-2, 3]$

6. Yes, domain $[-2, 2]$, range $[-1, 2]$

8. No.

20.



26. $-1/(1+x)$

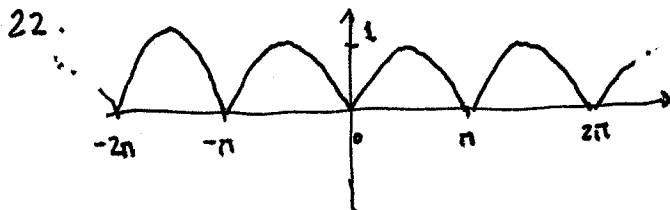
30. $[0, 4]$

54. $A = 6V^{2/3}$ (if the side length is a , then $A = 6a^2$ and $a = V^{1/3}$)

68. odd.

1.2 4. (a) G (b) f (c) F (d) g

1.3 2.(e) Shrink by a factor of 5 horizontally
 (f) Stretch by a factor of 5 vertically, then shift down 3 units



38. $2(1-x)^2 - 1 = 2x^2 - 4x + 1$

50. (e) 1 (f) 4

1.5 18. $2(1/3)^x$

26. (a) 32,000

(b) $500 \cdot 4^t$

(c) $500 \cdot 4^{2/3} \approx 1260$

1.6 6. Not 1-1. 10. 1-1

24. $x = \sqrt[3]{(y-3)/2}$

36. (a) $\frac{1}{25}$ (b) 10

38. $\ln\left(\frac{a^2 - b^2}{c^2}\right)$

66. $\frac{x}{\sqrt{1-x^2}}$

2.1

8 (a) (i) 6 (ii) ≈ -4.712 (iii) ≈ -6.134 (iv) ≈ -6.268

(b) Using $[1, 1.00001]$ gives ≈ -6.282 . In fact, the exact answer is $-2\pi \approx -6.2832\dots$

2.2

~~6~~ (e) 1 (f) -1 (g) doesn't exist (h) 1 (i) 2 ~~2~~ (j) does not exist

(k) 3 (l) does not exist

24. $\approx .588$ (value when $x = .0001$). In fact, the exact answer is $\ln(9/5) \approx .58779\dots$

34. (a) $x=0$, $x=3/2$

(b)

