

HOMEWORK 4.2 #9, 11, 39-45 4.3 #7-37, 51-57

$$y = x^2 + x - 1$$

x	y
0	-1
2	5

$$F(x) = x^2 + x - 1$$

$$F(3) = 3^2 + 3 - 1$$

$$F(0) = 0^2 + 0 - 1$$

$$9 + 3 - 1 = 11$$

$$F(3) = 11$$

$$F(0) = -1$$

$$(3, 11)$$

$$(0, -1)$$

4.2

#10  $g(x) = 0.8(5^x)$  ← Exponential Function

$$a) g(4) = 0.8(5^4)$$

$$0.8(625) = 500$$

⇒ equivalent to

$$b) g(1/4) = 0.8(5^{1/4})$$

$$0.8(1.4953487) = 1.196$$

$$2.718$$

$$c) g(5/4) = 0.8(5^{5/4}) = 5.981$$

$$g(4/5) = 0.8(5^{4/5}) = 2.899$$

$$\#42 e^5 = 148.413$$

$$\#44 e^{-3.2} = 0.041$$

## Section 4.3

#52  $\log 47 = 1.672$

#56  $\ln 381 = 5.943$

# kinda 56  $\log_e^{25} = \ln = 3.219$

# almost 52  $\log 10 = \log^{10} = 2$

Exponential Equations

$$5^2 = 25$$

$$4^3 = 64$$

$$2^5 = 32$$

base<sup>power</sup> = number

Logarithmic Equation

$$\log_5 25 = 2$$

$$\log_4 64 =$$

$$\log_2 32 = 5$$

$\log_{\text{base}}^{\text{number}} = \text{power}$

$$f(x) = x^2, g(x) = 2x$$

x	f(x)	g(x)
0	0	0
1	1	2
2	4	4
3	9	6
4	16	8
5	25	10