More Operators

Arithmetic Operators Operator Meaning Example Addition 3 + xSubtraction p - q6 * i Multiplication Division 10/4 Mod 11 % 8 % (remainder)

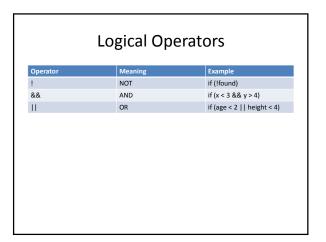
Modular Arithmetic

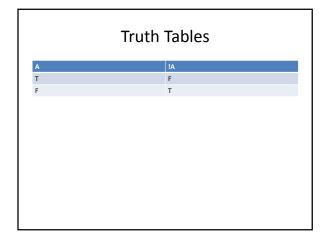
- 15 mod 4
- 87 mod 14
- 1023 mod 12
- 15 % 4 → 3
- 87 % 14 > 3
- 1023 % 12 → 3

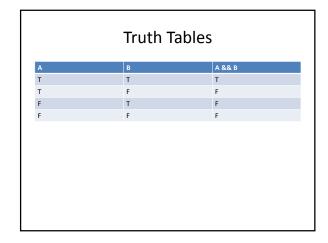
Arithmetic Precedence

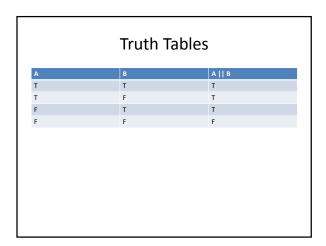
- Parentheses, from inner ones out
- *,/,%
- +, -
- 2+3*12%9-4/2

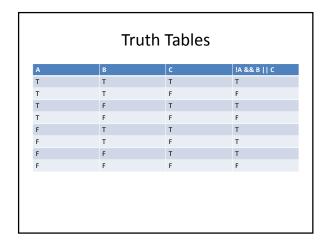
Relational Operators Meaning Example Operator Equal to if (x == 100)if (age != 21) Not equal to if (salary > 30000) Greater than Less than if (grade < 65) Greater than or if (age >= 16) equal to Less than or equal if (height <= 6)











Operator	Example	Meaning
=	x = 2	Simple assignment
+=	x += 4	x = x + 4
-=	y -= 6	y = y - 6
*=	p *= 5	p = p * 5
/=	n /= 10	n = n / 10
%=	n %= 10	n = n % 10
++	k++	k = k + 1
++	k++	k = k + 1

Operator Precedence
• (1) !, ++ • (2) *, /, % • (3) +, - • (4) <, >, <=, >= • (5) ==, != • (6) && • (7) • (8) =, +=, -=, *=, /=, %=

Which of these are conditions?

• x • x+100 • x==1 | | x==2 • x = 100 • x-100 • x==1 & x==2 • x==100 • x/100 • x==1&&x ==2 • x!=100 • x%100 • !x=1 • x>100 • x+=100 • !100 • x<100 • x = x + 1• !x==1 • x>=100 • x = 100 | 99 • true • x<=100 • x == 10 || 20 • false