

Given:

$$g = -9.8 \frac{m}{s^2}$$

Fall lasts  $\frac{365.24}{4}$  days

how far down is it?

add

| ^  
—  
=:  
>=  
>  
<  
! =  
.

Scr a bit

\* / % << >>

# Instruction Set Architecture

## ISA

operators

# prog reg

memory

Jumps

encoding size

x86-64

ARM

back  
door

if read  $0x23$  from mem, set secR to 1

$0x8A$  from mem & secR is 1, set secR to 2

⋮

kill

secR is 8 & set to 9

if secR is 9, execute all bytes in mem, NOT read



Stack pointer  
rsp



12  
~~23~~

0x12 foo()

0x23 foo()

return

23

rsp



mem[idx]

← PC + offset

goto

idx +

func

call

idx :=

pc

←

mem[idx]

ret

Condition Codes

1-bit regs

Flags

Jump if  $R_3 \leq 3$

last math

+

-

0

Overflow

⋮

neg  
cmp  
test

Jle  destination

move  $R_1 \rightarrow R_3$

move<sub>l</sub>  $R_1 \rightarrow R_3$

ARM7 — all condition

x86-64 — moves  
jumps