

HW1 解答

1. 若討論 "fib"

(a.)

for "+"

ins c: 1301

CycC: 1577

for "x"

ins c: 1301

CycC: 1637

ADD的CycC < MUL的CycC

因為乘法的運算較加法複雜

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(b) for "+"

$$\frac{1577}{1301} = 1.2121445$$

for "x"

$$\frac{1637}{1301} = 1.25826287 \quad \#$$

(c) for "+"

$$\frac{1577}{4 \times 10^6} = 3942.5 \times 10^{-9}$$

for "x"

$$\frac{1637}{4 \times 10^6} = 4092.5 \times 10^{-9} \quad \#$$

(d) $\frac{4 \times 10^6}{0.9} = 4.444 \times 10^6 \quad \#$

(e) for "+" and "-00"

$$\frac{\text{InsC} | \text{CycC}}{\text{CPI}} \Leftrightarrow \frac{3125 | 3674}{\frac{3674}{3125} = 1.17568}$$

for "+" and "-03"

$$\frac{970 | 1086}{\frac{1086}{970} = 1.119587}$$

for "x" and "-00"

$$\frac{3125 | 3785}{\frac{3785}{3125} = 1.2112}$$

for "x" and "-03"

$$\frac{924 | 1122}{\frac{1122}{924} = 1.214285} \quad \#$$

(f)

for "-00" $\Rightarrow \frac{5 \times 10^3}{1.8} = 2.7 \times 10^3$

for "-03" $\Rightarrow \frac{5 \times 10^3}{2.2} = 2.27 \times 10^3$

True, 程式的快慢是看它執行的時間

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2. (a) $\frac{1}{0.4 + \frac{0.6}{8}} = 2.0 < 4$

$\frac{1}{0.6 + \frac{0.4}{3}} = 1.36 < 4$

> both can't

(b) $\frac{1}{\frac{0.6}{8} + \frac{0.4}{3}} = 4.8 > 4$

∴

Can