

## Lab #2

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Question 1: a, b, e, f

(Note: Python allow input as a variable name.  
However, it is not recommended to use it  
because the function input will be unusable.  
Thus, it's not a valid variable name.  
keyword in Python)

Question 2: a, b, c, e, f

Question 3

ID = 2031140

my student number

(a)  $\text{print}(\text{ID} / 10) = 203114.0$

$$\begin{array}{r} 203114 \\ 10 \overline{) 2031140} \\ \underline{-20} \phantom{00} \phantom{00} \phantom{00} \phantom{00} \phantom{00} \phantom{00} \\ 031 \phantom{00} \phantom{00} \phantom{00} \phantom{00} \phantom{00} \phantom{00} \\ \underline{-30} \phantom{00} \phantom{00} \phantom{00} \phantom{00} \phantom{00} \phantom{00} \\ 11 \phantom{00} \phantom{00} \phantom{00} \phantom{00} \phantom{00} \phantom{00} \\ \underline{-10} \phantom{00} \phantom{00} \phantom{00} \phantom{00} \phantom{00} \phantom{00} \\ 14 \phantom{00} \phantom{00} \phantom{00} \phantom{00} \phantom{00} \phantom{00} \\ \underline{-10} \phantom{00} \phantom{00} \phantom{00} \phantom{00} \phantom{00} \phantom{00} \\ 40 \phantom{00} \phantom{00} \phantom{00} \phantom{00} \phantom{00} \phantom{00} \\ \underline{-40} \phantom{00} \phantom{00} \phantom{00} \phantom{00} \phantom{00} \phantom{00} \\ 0 \end{array}$$

Since in Python only  
the operator division  
always gives a float  
number, we add

(b)  $\text{print}(\text{ID} // 10) = 203114$

floor division  
round to the  
smallest integer

$$\frac{2031140}{10} = 203114$$

(d)  $\text{print}(\text{ID} \% 1000 - 10) = 130$

(no matter  
if we input  
integer)

$$\begin{array}{r} 2031140 \\ \uparrow \\ 2031000 + 140 \\ \uparrow \phantom{00} \phantom{00} \phantom{00} \phantom{00} \phantom{00} \phantom{00} \\ 2031 \times 1000 \end{array} \quad \begin{array}{l} \text{Remainder} \\ 140 - 10 = 130 \end{array}$$

(c)  $\text{print}(-\text{ID} // 10) = -203114$

$$\frac{-2031140}{10} = -203114$$

(e)  $\text{print}(\text{ID} * 1.0 // 3) = 677046.0$

$$2031140 * 1.0 = 2031140.0$$

$$\frac{2031140.0}{3} = 677046.667$$

$$(3 \times 677046 = 2031138)$$

(f)  $\text{print}(\text{ID} - 100.0) = 203104.0$

$$\begin{array}{r} 2031140 \\ - 100.0 \\ \hline 2031040.0 \end{array}$$

# 'b' is not equal to '0'

(g)  $b = (\text{ID} \% 2) != 0$

$\text{print}(b) = \text{False}$

$$\frac{2031140}{2} = 1015570$$

$$2 \times 1015570 = 2031140$$

0 Remainder

$0 != 0$  False