Clicker Questions for
L12: Tuples, Sets & Dictionaries

Questions for 2017-03-16
Q8: Dictionary Methods

If \( \text{dict} = \{'a': 20, 'b':5, 'c':10\} \)
what would the value of \text{dict} be after performing the following operations?

\[
\begin{align*}
\text{dict}[\text{'a'}] &= 30 \\
\text{del dict}[\text{'b'}] \\
\text{dict}[\text{'e'}] &= 15
\end{align*}
\]

A. \( \text{dict} \rightarrow \{'a': 30, 'b':5, 'c':10\} \)
B. \( \text{dict} \rightarrow \{'a': 30, 'b':5, 'c': 10, 'e': 15\} \)
C. \( \text{dict} \rightarrow \{'a': 20, 'c': 10, 'e': 15\} \)
D. \( \text{dict} \rightarrow \{'a': 30, 'c': 10, 'e': 15\} \)
E. none of the above
Q9: Iterating over dictionaries

If \( d = \{ 1 : 'a', 'b' : 2, 3 : 'c', 2 : 'b', 'c' : 0 \} \)

what values would be output if we ran the following code?
(ignore the order of the values in selecting your answer)

```python
for x in d.values:
    print(x, ',', '', sep = '', end = '')
```

A. a, b, c, b, c
B. 1, 2, 3, 2, 0
C. a, 2, c, b, 0
D. 1, b, 3, 2, c
E. none of the above
Q10: Iterating over dictionaries

If \( d = \{ 1:'a', 'b':2, 3:'c', 2:'b', 'c':0 \} \)

what values would be output if we ran the following code?
(ignores the order of the values in selecting your answer)

```python
for x in d:
    if d[x] in d:
        print(x, ',', ',', sep = '', end = ' ')
```

A. b, 3, 2,
B. 2, c, 0
C. a, 2, c, b, 0,
D. 1, 2, 3, 2, 0,
E. none of the above
Q11: Building a Dictionary

Consider the counting block:

```python
adenine_ct = 0
cytosine_ct = 0
guanine_ct = 0
thymine_ct = 0
for base in seq_line:
    if base == 'A':
        adenine_ct = adenine_ct + 1
    elif base == 'C':
        cytosine_ct = cytosine_ct + 1
    elif base == 'G':
        guanine_ct = guanine_ct + 1
    elif base == 'T':
        thymine_ct = thymine_ct + 1
```

Can it be implemented with a dictionary? How?

A. No. Cannot be implemented.
E. Yes. Keys: sequence header line. Values: code for each base and count for that base.