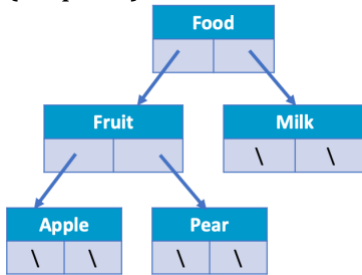


# STSCI 4060 Pop Quiz 3 Solutions

(3/11/2019)

Name \_\_\_\_\_

1. (15 pints) Based on the following binary tree, use a list to express it.



`['Food', ['Fruit', ['Apple', [], []], ['Pear', [], []]], ['Milk', [], []]]`

2. (15 pints) Write the output after the following Python commands are executed.

```
>>> mult3 = filter(lambda x: x % 3 == 1, [0,1, 2, 3, 4, 5, 6, 7, 8, 9])
>>> mult3
```

`[1, 4, 7]`

3. (20 pints) List all possible strings to which this regular expression 'x-{0,3}y' can match.

`'xy'`  
`'x-y'`  
`'x--y'`  
`'x---y'`

3. (40 pints) What will be output after the following regular expressions are executed in Python? You need to write exactly what is output.

```
>>> import re
>>> obj=re.compile('\w+')
>>> obj.findall('There were 20 people, who ate 100 apples.')
```

`['There', 'were', '20', 'people', 'who', 'ate', '100', 'apples']`

5. (10 pints) What will be output after the following regular expressions are executed in Python? You need to write exactly what is output.

```
>>> import re
>>> j=re.compile('[0].')
>>> m=j.search('stsci 4060 is cool')
>>> m.group()
```

`'06'`