QUIZ 2

COMP9021 PRINCIPLES OF PROGRAMMING

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$ python3 quiz_2.py
Enter three strictly positive integers: 1 1 1
Here is L:
[1]

The size of the simplest fraction <= 1 built from members of L is: 2
From smallest to largest, those simplest fractions are:
    1/1
The size of the most complex fraction <= 1 built from members of L is: 2
From largest to smallest, those most complex fractions are:
    1/1
The highest multiplicity of prime factors of the latter's denominators is: 0
These prime factors of highest multiplicity are, from smallest to largest:
    []
$ python3 quiz_2.py
Enter three strictly positive integers: 1 10 10
Here is L:
[3, 10, 2, 5, 2, 8, 8, 8, 7, 4]

The size of the simplest fraction <= 1 built from members of L is: 2
From smallest to largest, those simplest fractions are:
    1/5
    1/4
    2/7
    3/8
    2/5
    3/7
    1/2
    4/7
    3/5
    5/8
    2/3
    5/7
    3/4
    4/5
    7/8
    1/1
The size of the most complex fraction <= 1 built from members of L is: 3
From largest to smallest, those most complex fractions are:
    7/10
    3/10
The highest multiplicity of prime factors of the latter's denominators is: 1
These prime factors of highest multiplicity are, from smallest to largest:
    [2, 5]
```

Date: Session 2, 2018.

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$ python3 quiz_2.py
Enter three strictly positive integers: 1 5 1000
Here is L:
[138, 583, 868, 822, 783]

The size of the simplest fraction <= 1 built from members of L is: 2
From smallest to largest, those simplest fractions are:
    1/1
The size of the most complex fraction <= 1 built from members of L is: 6
From largest to smallest, those most complex fractions are:
    261/274
    411/434
    783/868
    583/783
    583/822
    583/868
    138/583
The highest multiplicity of prime factors of the latter's denominators is: 3
These prime factors of highest multiplicity are, from smallest to largest:
    [3]
$ python3 quiz_2.py
Enter three strictly positive integers: 1 10 200
Here is L:
[35, 146, 196, 17, 66, 31, 127, 195, 116, 121]

The size of the simplest fraction <= 1 built from members of L is: 2
From smallest to largest, those simplest fractions are:
    1/1
The size of the most complex fraction <= 1 built from members of L is: 6
From largest to smallest, those most complex fractions are:
    195/196
    116/121
    121/127
    116/127
    127/146
    121/146
    146/195
    127/195
    127/196
    121/195
    121/196
    116/195
The highest multiplicity of prime factors of the latter's denominators is: 2
These prime factors of highest multiplicity are, from smallest to largest:
    [2, 7, 11]
```

```
$ python3 quiz_2.py
Enter three strictly positive integers: 1 15 15
Here is L:
[3, 10, 14, 13, 13, 2, 5, 2, 8, 13, 8, 8, 11, 7, 13]

The size of the simplest fraction <= 1 built from members of L is: 2
From smallest to largest, those simplest fractions are:
    1/7
    1/5
    1/4
    2/7
    3/8
    2/5
    3/7
    1/2
    4/7
    3/5
    5/8
    2/3
    5/7
    4/5
    7/8
    1/1
The size of the most complex fraction <= 1 built from members of L is: 4
From largest to smallest, those most complex fractions are:
    13/14
    10/11
    11/13
    11/14
    10/13
The highest multiplicity of prime factors of the latter's denominators is: 1
These prime factors of highest multiplicity are, from smallest to largest:
    [2, 7, 11, 13]
$ python3 quiz_2.py
Enter three strictly positive integers: 1 6 50
Here is L:
[9, 37, 49, 5, 17, 8]

The size of the simplest fraction <= 1 built from members of L is: 2
From smallest to largest, those simplest fractions are:
    5/9
    5/8
    8/9
    1/1
The size of the most complex fraction <= 1 built from members of L is: 4
From largest to smallest, those most complex fractions are:
    37/49
    17/37
    17/49
The highest multiplicity of prime factors of the latter's denominators is: 2
These prime factors of highest multiplicity are, from smallest to largest:
    [7]
```