Titans Invitation 2025 Novice Problem Set

1) How many moons?

Write a program, that knows the number of moons that each planet has. When the user enters a planet, it should print the number of moons that orbit that planet.

Mercury: 0 moons, **Venus:** 0 moons, **Earth:** 1 moon, **Mars:** 2 moons, **Jupiter:** 79 moons, **Saturn:** 82 moons ,**Uranus:** 27 moons, **Neptune:** 14 moons

Sample Input	Sample Output
Mercury	0 moons
Neptune	14 moons

2) Moon Total:

Write a program that asks the user to enter a list of planets then calculates the total number of moons orbiting the planets on the list.

Sample Input	Sample Output
Mars Neptune	There are 16 moons in total.
Mercury Venus Earth Mars	There are 3 moons in total.

3) How far apart are they?

Write a program that asks the user to enter two planet names and then calculates how far apart they are. The answer must be a positive number. You may assume that the planets are all lined up. Report the distance in million km. 1 billion = 1000 million.

The distance that each planet is from the sun is as follows:

Mercury: 58 million km, **Venus:** 108 million km, **Earth:** 150 million km, **Mars:** 228 million km, **Jupiter:** 778 million km, **Saturn:** 1.4 billion km, **Uranus:** 2.9 billion km, **Neptune:** 4.5 billion km

Sample Input	Sample Output
Mercury Saturn	1342 million km
Venus Earth	42 million km

4) Seeing Stars

Using the python turtle (or a similar graphics package), ask the user to enter an integer n, between 1 and 10, then draw n stars. The stars must have 5 points, reasonable similar line lengths and angles.

Sample input:	Sample output:
3	

5) Lowest common multiple
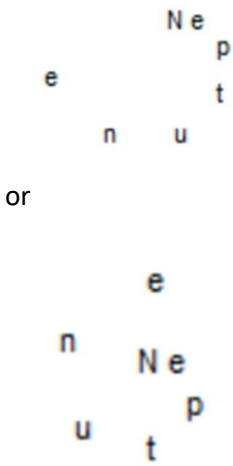
6 x 4 equals 24 but the lowest common multiple of 4 and 6 is 12.

Write a program that will ask the user to enter 2 numbers and prints the lowest common multiple.

Sample Input	Sample Output
4,6	12
8,12	24
7,5	35

6) Spiral

Write a program that asks the user to enter a word then draws a spiral using the letters of that word

You may use a graphics package like 'turtle' or you may print it to the console but it must be a spiral

Sample Input	Sample Output
Neptune	

Novice question Marking:

1) Mars→2
2) Earth Saturn →83
3) Mars Neptune→ 4272 million km

4) 5→ ✷ ✷ ✷ ✷ ✷

5) 6,8→24

6) Jupiter → Jupiter