

1 Lost on the Moon

Your spaceship has just crashed on the moon. You were scheduled to rendezvous with a mother ship 200 miles away on the lighted surface of the moon, but the rough landing has ruined your ship and destroyed all the equipment on board except for the 15 items listed below.

Your crew's survival depends on reaching the mother ship, so you must choose the most critical items available for the 200-mile trip. Rank the 15 items in terms of their importance for survival. (1: most important, 15: least important.)

Item	Your Rank (1)	Group's Rank (2)	NASA's Rank (3)	$ (3) - (1) $	$ (3) - (2) $
Box of matches					
Food concentrate					
50 feet of nylon rope					
Parachute silk					
Solar-powered portable heating unit					
Two .45 caliber pistols					
One case of dehydrated milk					
Two 100-pound tanks of oxygen					
Stellar map (of the moon's constellations)					
Self-inflating life raft					
Magnetic compass					
5 gallons of water					
Signal flares					
First-aid kit containing injection needles					
Solar-powered FM receiver-transmitter					
Total					

2 Express Yourself

2.1 What's the difference between a *primitive expression* and a *call expression*?

2.2 Identify each expression: is it a *primitive expression* or a *call expression*?

(a) 3

(b) `add(2, 3)`

(c) `sub(5, 2)`

(d) `add`

(e) `3 + 4`

3 What Would Python Display?

Assume all Python standard library names like `add` and `sub` have been imported.

3.1 `>>> add(3, 5)`

3.2 `>>> add(3, add(1, 2))`

3.3 `>>> add(7, 3, 5)`

3.4 `>>> add(sub(6, 4), add(4, 2))`