Raven Stare Down





Egwene faces due north as she rests, sitting in the thick grass of Edmond's Field. The unobstructive meadow helps her to scout out any nosy ravens that might cast unfavorable shade on today's shearing event.

She sits unmoved as a raven passes from behind her, hopping westward in a straight line.

The bird is at its closest distance to Egwene at 30 WL (Westland) feet.

Unbeknownst to the raven, Egwene has a 210 degree horizontal field of view and will see the raven as it crosses into her viewing angle.

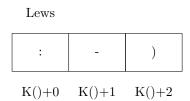
Once the bird walks into her field of view, then the staring contest can commence; and ultimately upon seeing Egwene's scowl the snoopy bird will depart.

Assuming that the raven walks in a straight line and that Egwene will only move her eyes to reach a maximal 210 degree viewing angle, how far in WL feet will the bird need to hop in order for it to become visible to Egwene?

EOTW -1

Set in The Eye of the World > Earlier Ravens Prologue

Heal the Corrupted Memory



Elan



$$K()+0 \quad K()+1 \quad K()+2$$

Lews Therin is joyously searching for his wife inside his charred palace as he stands next to the corpses of all his own kin who had met their fatal end, and is found to be in a state of mindless bliss as Elan Morin Tedronai appears.

As they exchange words Elan becomes aware that Lews is ignorant to the fact that Lews had performed this murderous act.

Lews' memory about what has happened to his kinsfolk has been corrupted. Elan has the real memory that can be employed to heal Lews' corrupted version of events. Assume that the memory of the event is stored as a 3-letter happy :-) emoticon in Lews' memory and can be healed by Elan's real memory, indicated by a dead person X_X emoticon.

Healing can be performed 1 letter at a time; each letter of the emotion components reside in their own memory unit as an adjoined sequence in both Elan's and Lews' memory.

There are 3 magical functions that can be combined in a way to fully heal Lews' memory. What is the order of functions performed, spelled out as a pronounceable spell that will heal Lews' memory?

spell: _ _ _ _

Functions:

- **H()** heals 1 letter memory unit at the paired position.
- I() increments the paired healing position forward 1 letter in memory.
- **K()** positions the paired healing position to start at the kinsfolk memory.

EOTW 0

Set in The Eye of the World > Prologue Dragonmount

Wind-blocking Cloak

The dark rider that has been following Rand and Tam down the Westwood road stops to light a fire.

His cloak has been appearingly immovable in spite of heavy wind. Let's assume that it is the cloak's weight that is causing the immovability, with equal weight being distributed throughout the fabric.

The rider removes his cloak and ties it to branches on a nearby tree just in the right spot so it will block the wind when he lights the fire.

Assume that he had performed a magic spell that gave extra magic weights to what was previously a normal fabric coat, but that he did so without any wasted magic; this means that the force of gravity of the coat is equal to the wind force.

```
F = ma
F_{wind} = F_{cloak}
```

The wind force is being applied across the whole 3 square meter cloak with an air density mass of $1.229kg/m^3$ and a speed of 46.4922 meters per second (104 mph).

The gravitational force of the cloak is affected by gravity that accelerates by 9.8 meters per second every second.

What is the weight of the cloak?

EOTW 1

Set in The Eye of the World > An Empty Road

Solutions

SLN EOTW -1

111.96152422706633 WL feet

```
#!/bin/python3
from math import tan
from math import pi
def solve(fov, nearestDist):
   if fov <= 180:
       raise Exception("Raven will not be seen crossing a field of view <=180")
   if fov >= 360:
       raise Exception("Raven would already be seen by a field of view >=360")
   southFov = fov - 180
   southWestFov = southFov / 2.0 # removes east component of the FOV
   theta = 90 - southWestFov # angle used in toa (of sohcatoa)
   # -----
                              (Egwene)
      $/|\S
                     $
   #
                              southWestFov
      /#|
                      #
   #
                             theta
   # / |30
                     0
                              (raven)
   # / |WL
# / |feet
                     $+S
                              southFov
                     $+S+180 fov
   #/____@
   # opp
   thetaRad = theta * pi / 180
   opp = tan(thetaRad) * nearestDist
   return opp
if __name__ == '__main__':
   fov = 210
   nearestDist = 30
   ans = solve(fov, nearestDist)
   print(ans, 'WL feet')
```

SLN EOTW 0

```
#!/bin/python3
from random import randrange
L_PTR = randrange(30)
E_PTR = randrange(38)
l_bytes = list("other Lews Therin memories :-)") # (corrupt) happy emoticon
e_bytes = list("other Elan Morin Tedronai memories X_X")  # dead person emoticon
def H():
    global e_bytes
    global l_bytes
    # heal the memory (transferring Elan's memory to Lews) at point
    1_bytes[L_PTR] = e_bytes[E_PTR]
def K():
    global L_PTR
    global E_PTR
    # go to Kin memory address
    L_PTR = 30-3 # address of last 3 bytes
    E_PTR = 38-3 # address of last 3 bytes
def I():
    # incremement pointer address
    global L_PTR
    global E_PTR
    L_PTR += 1
    E_PTR += 1
def solve():
    print("Healing memory...KHIHIH")
    K()
    H()
    I()
   H()
    I()
    H()
    return (''.join(l_bytes))[-3:]
if __name__ == '__main__':
    print('Kin Memory: ' + ((''.join(l_bytes))[-3:]))
    print('Kin Memory: ' + solve())
Kin Memory: :-)
```

Healing memory...KHIHIH Kin Memory: X_X