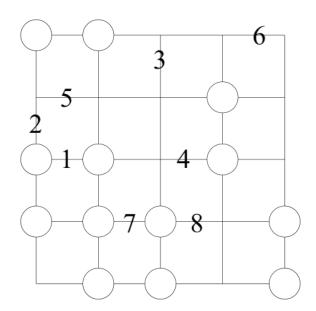


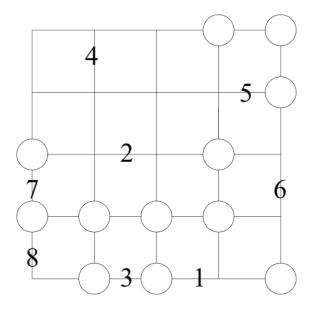
Excuuse me, adventurers! My name is Knot, and apparently I'm some kind of fabled Hero of Logic? To be honest I'm not sure what that means, but this old man told me to find the pieces of the "Prism of Acuity", and use them to defeat some kind of evil beast king named Wargon, and save the Princess. The problem is, every random cave and dungeon we find in our Kingdom of Hyreign is filled with puzzles, and well, they say "it's dangerous to go alone". So if you're not doing anything for the next few hours, maybe you can help me avoid a Game Over?

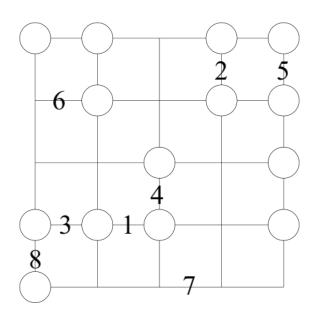
In the MaPP Challenge, you'll face Location Mini-Puzzles, Warm-Up Puzzles, Main Puzzles, and Cryptic Puzzles. Each Location Mini-Puzzle solves to a code associated with a certain campus landmark. Entering this code into your smart device then unlocks a bigger Puzzle, which hides a secret word or phrase that you'll need to use logic and creativity to reveal. Entering this passphrase into your device reveals further puzzles, until the final Metapuzzle is found. Solve this Metapuzzle to win the game!

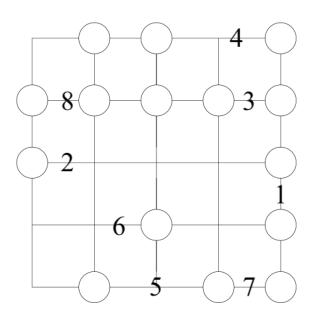
With your help, we'll return harmony to Hyreign. Let's get puzzling!

Ancient Glyphs (pg 1/3)



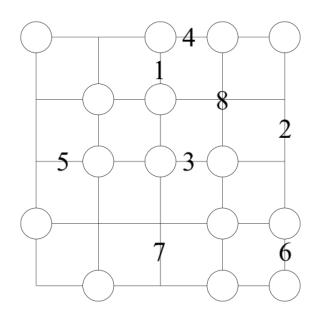


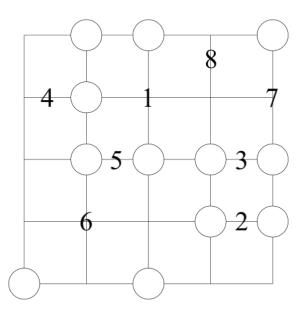


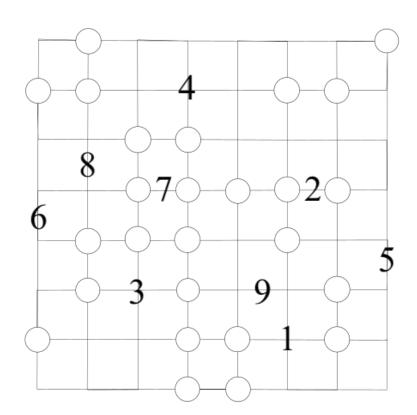




Ancient Glyphs (pg 2/3)

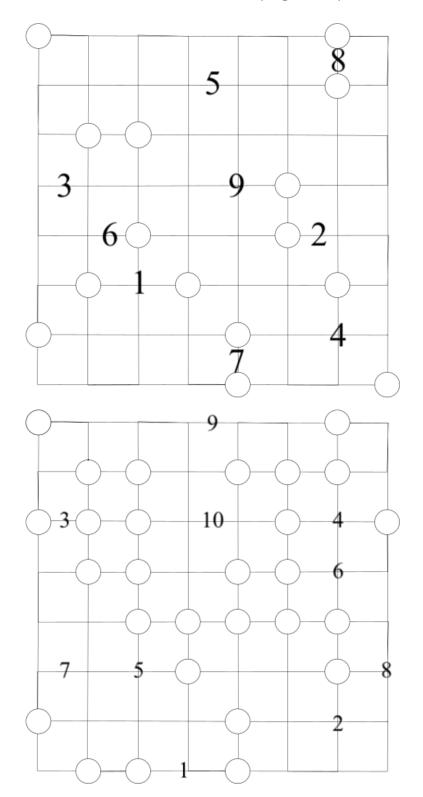






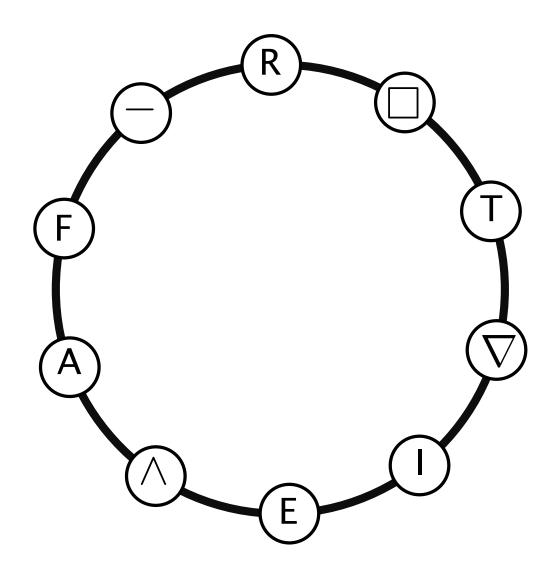


Ancient Glyphs (pg 3/3)





The Royal Table



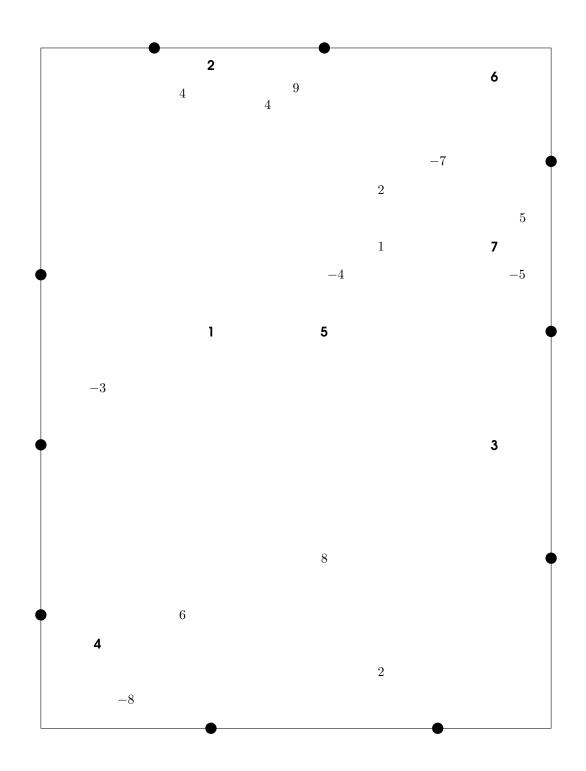


Expand Your Mind

 ${\bf qkethece} {\bf RktothegcqeldtobLkdHm}$

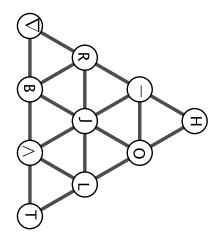


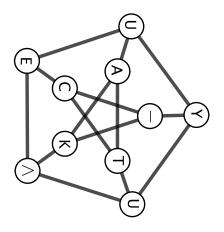
Hyreign Field

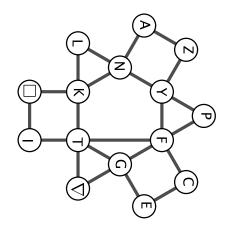




Don't Let Down Your Guards









The Legend Foretold

I	T	B	E	G	a	N	w	H	e	n	k
I	n	g	F	0	U	l	W	A	r	G	O
$\mid n \mid$	S	T	0	$\mid L \mid$	E	t	h	$\mid E \mid$	P	r	i
$oxed{S}$	M	O	f	S	T	r	e	N	G	T	h
P	r	I	n	C	E	S	S	y	A	Z	M
$\mid i \mid$	N	B	r	O	k	E	h	$\mid e \mid$	R	P	r
$\mid i \mid$	S	M	O	$\int f$	a	C	U	I	t	y	I
N	t	0	S	I	\boldsymbol{x}	P	I	E	C	e	s
$\mid t \mid$	O	H	I	D	E	I	t	F	R	O	m
W	a	r	g	O	N	k	n	O	T	G	0
F	I	n	D	$\mid T \mid$	H	E	p	R	i	S	m
t	0	S	a	$\mid v \mid$	E	Y	A	z	m	i	N



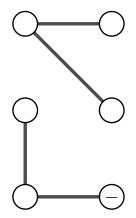
The Game of Sages

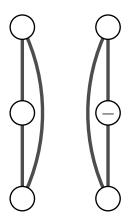
Aginah	Sylver	Aginah	Sylver
6	19	20	7
21	16	12	8
7	x_7	25	x_2
17	x_6	17	11
9	10	13	10
11	5	x_3	6
4	3	5	4
2	1	3	2
		1	

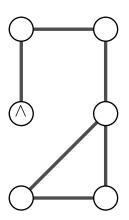
Aginah	Sylver	Aginah	Sylver
19	15	17	18
8	13	10	7
11	25	26	15
x_8	17	23	x_5
18	12	12	5
14	9	x_4	13
10	x_1	11	9
6	4	6	8
5	2	4	2
3	1	3	1

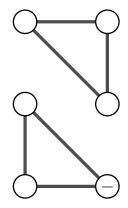


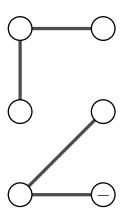
Feeling Pressure













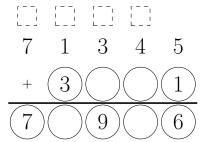
The Big Key

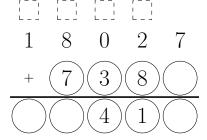
Nx gals mifa evf oinf vscv uonh,

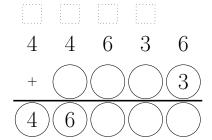
xs wyną eos uubg yusv: nąr wssjn kbm.

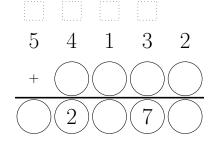


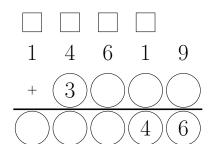
Rubee Ledgers

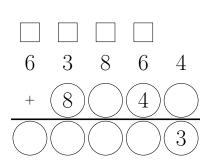


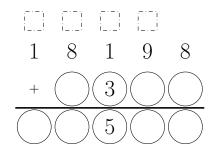


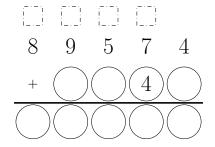






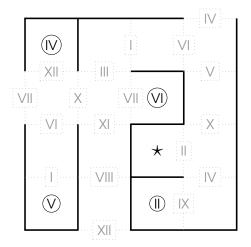


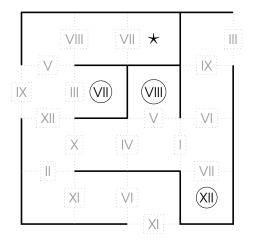


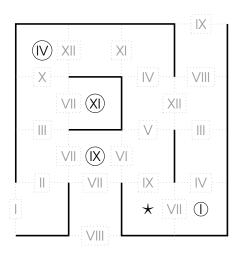


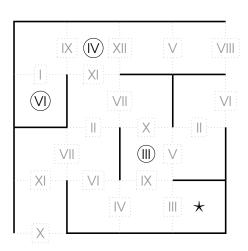


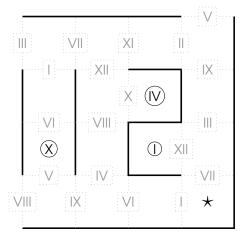
Expiry Mountain













Code Reference

Letter	Decimal	Binary	Morse	Braille
Α	1	00001		• :
В	2	00010		•
С	3	00011		::
D	4	00100		• •
Е	5	00101		•
F	6	00110		•
G	7	00111	,	• •
Н	8	01000		•
1	9	01001		•
J	10	01010		• •
K	11	01011	-,-	•
L	12	01100		
М	13	01101		• •

Letter	Decimal	Binary	Morse	Braille
Ν	14	01110		• •
0	15	01111		•
Р	16	10000		•
Q	17	10001	,-	
R	18	10010		
S	19	10011		
T	20	10100	-	
U	21	10101		••
V	22	10110		
W	23	10111		•
Χ	24	11000		• •
Υ	25	11001	-,	
Z	26	11010		



Clues

Location Puzzles: Ancient Glyphs

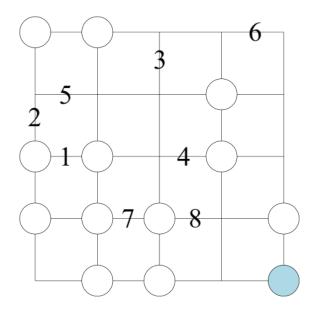
Several locations in Hyreign have been hidden away by the passage of time. Great artifacts have been said to be stored in these areas. To unlock access to these secret locations in Hyreign, we must activate all of the glyphs on the stones hidden in nine caverns. The maps of the caverns and the rooms the stones are in are shown. To highlight all of the stones in each cavern, we must follow several rules.

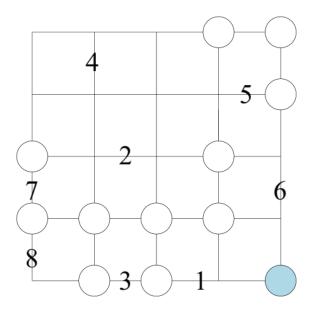
- We must start at the indicated stone and follow any other rules given by the cavern
- When we come to a room with a stone, we must activate it if it has not yet been activated. Once activated, the stone cannot be activated again.
- We may only change direction when activating a stone.
- We may not make 180° turns

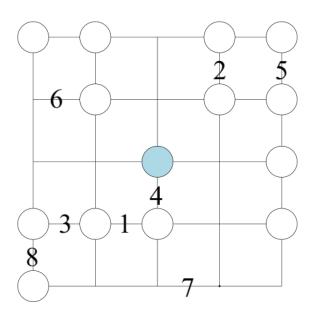
Once you have successfully activated all of the stones in a cavern, a location should be revealed!

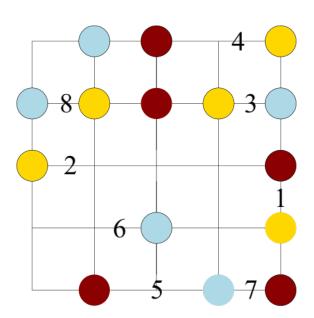


Ancient Glyphs Clues (pg 2/5)



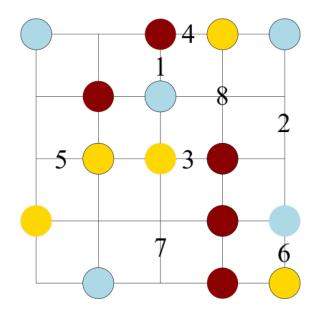


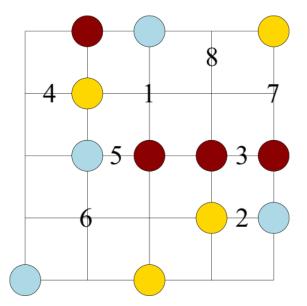


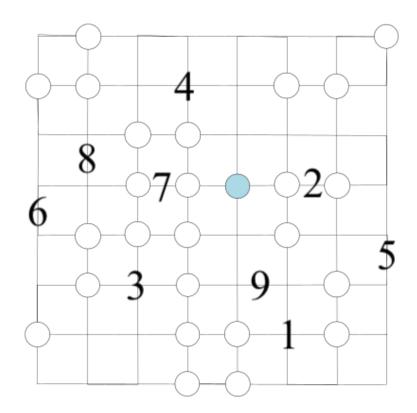




Ancient Glyphs Clues (pg 3/5)

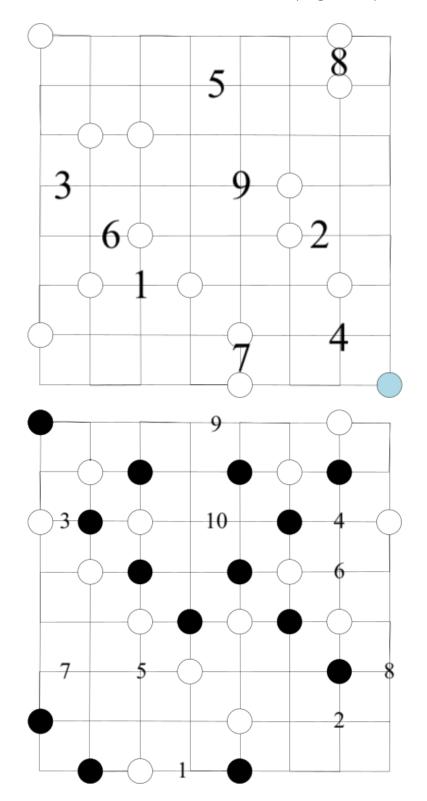








Ancient Glyphs Clues (pg 4/5)





Ancient Glyphs Clues (pg 5/5)

- 1. Start on blue
- 2. Start on blue
- 3. Start on blue
- 4. Start on blue, following the pattern blue, yellow, red.
- 5. Start on blue, following the pattern blue, yellow, red.
- 6. Start on blue, following the pattern blue, yellow, red.
- 7. Start on blue
- 8. Start on blue
- 9. Start on black, following the pattern black, white.



Warm-up Puzzle 1: The Royal Table

With Wargon's minions approaching, the King and Queen of Hyreign are hosting a meeting to plan a defense while we track down the magic Items. Each village in Hyreign will send its top two leaders to sit at the table with the King and Queen.

- The two leaders from Dashing (–) must sit only one seat apart (that is, directly next to one another).
- The two leaders from Wedgetown (\land) must sit exactly two seats apart.
- The two leaders from Nablan (∇) must sit exactly three seats apart.
- The two leaders from Boxuto (□) must sit exactly four seats apart.
- As is custom, the King and Queen must sit at the head of the table... but any seat can be the head of a round table, so we really only know that the King and Queen will sit as far away from each other as possible.

If we can help the royals with their seating arrangement, they'll grant us with a magic Item. To spell out what that is, use the letters where we must seat $-, \wedge, \nabla$, and \square .



Warm-up Puzzle 2: Expand Your Mind

The Chique-ah civilization would have been wiped out if not for the proud tradition of compressed messages. The legend of how Empa saved them from Wargon is still found above the entrance to the Dark Temple. Decompressing its meaning will reveal what Item the Chique-ah used with their lasers to avoid defeat.

Before sending a message in those days a Chique-ah would always do this in this order.

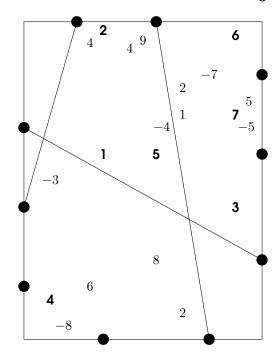
- If the phrase has three consecutive "s" letters, then the middle one is removed.
- if an "n" follows an "i", then the "n" would be changed to a "k"
- Any instance of "las" would be changed into a "c"
- Any instance of "shi" would be changed into a "q"
- Any letter that precedes an "i" would be changed to a capital letter and the "i" would be removed.



Warm-up Puzzle 3: Hyreign Field

You'd think they'd finance the world's last hope of survival, but nope, every shopkeeper in Hyreign still charges me full price for all the necessities of adventuring. Luckily, folks in these parts are terribly clumsy with their cash: you can easily find Rubees of various amounts scattered around Hyreign Field.

There's a field of numbers shown on one of the pages. In this puzzle, we need to connect six marked spots on the border using three straight lines, leaving four marked spots unused. An example of this is shown below, but our task is to instead draw these lines such that each of the regions we create contains exactly three numbers (whether they are bold or not). If we do this correctly, we can add the numbers in each region to get a value between 1 and 26. Using the code 1=A, 2=B, and so on, we'll reveal the name of one of our magic Items!





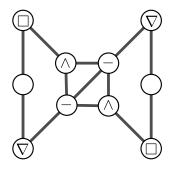
Main Puzzle 1: Don't Let Down Your Guards

Wargon's forces are on the attack and Hyreign's Castles must be guarded! The four villages have agreed to each provide soldiers to help guard the various towers, but refuse to send one of their guards to a castle alone:

- Each castle cannot have a single guard from a village (but may have zero guards).
- Just like their leaders at The Royal Table, all guards from Dashing (−) insist on being exactly distance one apart (in adjacent towers), all guards from Wedgetown (∧) must be exactly distance two, all guards from Nablan (∇) must be exactly distance three, and all guards from Boxuto (□) must be exactly distance four from each other.

We've been provided with depictions of three castles that have been partially guarded already; we cannot change those assignments. If we can assign as many guards as possible to each castle, following the above rules, then the unguarded towers should reveal the name of another magic Item.

The below image is an example of an optimally guarded castle, as it's impossible to leave less than two towers unguarded in this example.





Main Puzzle 2: The Legend Foretold

The ancient Chique-ah civilization built special communicators to send messages to different kingdoms, and they always broke up their messages into special blocks. But when messages travel long distance, sometimes the original meaning can get lost. The extra careful Chique-ah wanted to make sure their messages were received correctly. So in each block, they built in some redundancy.

Since Chique-ah liked everything balanced, we know they always included an even number of uppercase letters in every 4×4 block. Furthermore, within each block, each special shaded region of 8 squares illustrated below must also abide by this even number policy. Therefore, if this even number policy is not followed, then we know that part of the message was changed.

I bet if we find which 7 letters were altered, we'll uncover the name of another magic Item.

A	A	A	a
a	A	A	A
a	A	A	A
A	A	A	a

A	A	A	a
$\mid a \mid$	A	A	A
a	A	A	A
A	A	A	a

A	A	A	a
a	A	A	A
a	A	A	\boldsymbol{A}
A	A	A	a

A	\boldsymbol{A}	\boldsymbol{A}	a
a	A	A	A
a	A	A	A
A	A	A	a



Main Puzzle 3: The Game of Sages

In the land of Hyreign, we use Rubees to buy and sell goods. While you might expect us to use a sensible system where a blue Rubee is worth five, and a red Rubee is worth ten, long ago some wacky former King decided he didn't like Rubee values that can already be made by adding combinations of existing Rubees.

So now we have a bizarre system. Every year, two sages named Aginah and Sylver play a game to decide what values our Rubees will have in the upcoming seasons. Each sage alternates choosing a positive whole number value for a new type of Rubee, with the rule that each chosen number is never equal to a sum of previously-chosen numbers.

So suppose Aginah says the first Rubee is worth 4. Then Sylver cannot choose 8=4+4, 12=4+4+4, and so on. Then if Sylver chooses 3, well, it turns out Aginah can only choose 1, 2, or 5 on their next turn; for example, 11 isn't allowed since 11=3+4+4. The game is over when a player is forced to pick 1 as their value.

Anyway it's a real pain, and of course one of the puzzles we need to solve looks to be based on this idea. We've been given four partial playthroughs of this game - if we can find the missing numbers, they will tell us the name of another magical Item we'll need to defeat Wargon!

Aginah	Sylver
4	3
5	2
1	



Cryptic Puzzle 1: Feeling Pressure

While soldiers from the villages of Nablan (∇) and Boxuto (\square) have left us, there is still more guarding to be done. The soldiers from Dashing (-) and Wedgetown (\wedge) have sharpened their swords for one more night of guarding these five castles. I have the feeling that our reward will be another Item.



Cryptic Puzzle 2: The Big Key

The Chique-ah have sent one last message, but it looks strange. Maybe we can decode this somehow?

In the past we received the message **nmhbzd-Im** and got back **chique-ah** by reversing the use of a KEY.

chique-ah +keykey-ke nmhbzd-lm

Unfortunately, we tried using this KEY to decode the current message, and we got back gibberish. Perhaps we should be using the Item we found in Main Puzzle 2: The Legend Foretold instead?



Cryptic Puzzle 3: Rubee Ledgers

While we're on the topic of Hyreignian economics, I have to say that our accountants are... weird. When balancing their Rubee ledgers, they love to find sums where each of the digits 1-9 are used exactly once within the second term and the result. This is a very old tradition, so perhaps knowing how this ancient ritual has carried over will help you reveal the name of another magical Item.



Metapuzzle: Expiry Mountain

Finally, it's time. On the summit of Expiry Mountain are five dungeons, each of which contains a *-shaped piece of the Princess's shattered Prism of Acuity. By collecting these five pieces, we'll have enough power to battle Wargon and save the Princess (who still holds the final sixth piece).

Throughout our adventure we've collected several Items which we'll need to traverse each dungeon. Each dotted passage is marked with a Roman numeral I through XII which (according to the list below) describes the Item we must have in our inventory to pass through it. We can also pick up new Items within each dungeon by visiting rooms with a circled Roman numeral. Items we've collected throughout our adventure may be used as many times as we want in as many dungeons we want. However, Items we find in dungeons are brittle - we can use them as much as we want within the dungeon, but they'll break when we exit and cannot be used elsewhere.

Once we've navigated all five dungeons using our Items (taking care not to visit any unnecessary rooms), we'll learn a final magic spell that will guarantee the prosperity of Hyreign and the Princess. Let's do it!

- I A percussive instrument
- II A sharp weapon
- III An extendable grapple
- IV A stick for catching trout
- V Protection for a hand
- VI Colorful clothes
- VII A mystical cane
- VIII Transparent protection
- IX Winged shoes
- X Weapon with a taut string
- XI A spell casting heat and light
- XII A source of explosives



Hidden puzzle: Who is our princess?

So you've come here for an unmarked puzzle! Just like this puzzle, the name of our princess seems to be hidden. No where in any of the instruction has the name of our princess been mentioned, but if you look carefully you will be rewarded if you can tell us her name.



Answers

- Location Puzzle 1: 824
- Location Puzzle 2: 637
- Location Puzzle 3: 158
- WarmUp Puzzle 1: FIRE
- WarmUp Puzzle 2: GLASSSHIELD
- WarmUp Puzzle 3: BOMBBAG
- Location Puzzle 4: 245
- Location Puzzle 5: 463
- Location Puzzle 6: 572
- Main Puzzle 1: BLUETUNIC
- Main Puzzle 2: TIMPANI
- Main Puzzle 3: GRIPSHOT
- Location Puzzle 7: 316
- Location Puzzle 8: 781
- Location Puzzle 9: 914
- Cryptic Puzzle 1: BLADE
- Cryptic Puzzle 2: GREATBOW
- Cryptic Puzzle 3: MITT
- Metapuzzle: PEACE
- Hidden Puzzle: YAZMIN

