

Qatalog

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Answer: **EMBELLISH**

This is a suite of six minipuzzles based on Qat, a word lookup tool with a custom regex-like syntax and the ability to include "variables" in searches. Some of the puzzles require learning actual Qat syntax, and some use liberal reinterpretations.

A few of the puzzles involve entering queries in Qat, and in these cases the answer will always be contained in PDL, the most restrictive dictionary. This is clued obliquely in the flavor text ("Please don't lick!"), and the link at the top of the puzzle leads to a Qat page with PDL selected.

#1, Copyqats: This is a list of Qat queries. Each query has a surface reading as a crossword clue whose answer is matched by another query. For example, `*(beer|or|gin)&*eg*` clues "alcohol", which is a match for the query `/halo[of][solar][eclipse]`. Solving and matching the clues this way produces a single cycle:

<code>*(beer or gin)&*eg*</code>	begin	alcohol
<code>/halo[of][solar][eclipse]</code>	alcohol	corona
<code>[chess]or[poker][noble][man]</code>	corona	king
<code>`sing&*[awkwardly]*</code>	king	warble
<code>6:<[limbed][hill][dweller]</code>	warble	ant
<code>([grace]&[frankie]).[actor]/martin</code>	ant	sheen
<code>*[blank]&.[catch][fire](/[television][series])</code>	sheen	halt
<code>~[late][likud][politician][menachem]</code>	halt	begin

Reading the initials of the words this cycle, starting at BEGIN and ending at HALT, spells the answer BACKWASH.

#2, Dropqat: This is a dropquote for some unknown 9-word sentence, but the characters being dropped are Qat characters! Some characters can only be placed in only one reasonable way, resulting in the following observations:

- The first and seventh words are the same.
- The third word probably ends in n.
- The fifth word probably includes the string "jump".
- The last word is also a word backwards.
- There are a lot of unusual letters in the quote: j, q, x, y, and z all appear.

There's one reasonable nine-word sentence with these properties: "The quick brown fox jumps over the lazy dog." Fill in the rest of the dropqat to get each word to match:

A	;	q	.	i	*	;	>	n	;
f	>	&	<	x	;	/	j	m	p
*	;	~	r	e	#	o	;	A	;
`	h	@	z	y	;	-	6	:	<

Once the table is filled, the characters in the numbered boxes read: 6:p>&.#@i*
 Entering this query in Qat gives one result: PRAISE.

#3, Qat Scan: This is a wordsearch using Qat syntax, with variables X, Y, and Z appearing in many places in the grid. Finding the words in the grid, we can determine the values of these variables: X = sec, Y = ti, and Z = on.

a	n	Y	q	@	@	a	u
n	Z	Z	~	s	Y	w	Y
~	X	i	u	m	e	X	l
e	r	~	i	t	o	r	~
Z	t	d	i	X	h	e	Y
z	i	s	r	v	X	t	y
o	Y	@	Z	i	Z	s	X
Y	p	Z	Y	1	1	~	Z

antique	cesium
noon	novices
ozone	parsec
pontiff	secret
timid	utility

Just to be extra sure that this is the answer, we can read "answer to this XYZ is XYZ" in the unused spaces. So, indeed, the answer to this section is SECTION.

#4, Qat Calls: These are Qat rebuses. That is, it's Qat, except the user enters pictures instead of letters, and the parser interprets them phonetically.

"kernel"	"men"* & *"knee"	`"phone"&"vane"	1"Rome"1	~"scale"
kernel	/mɛn/* & */ni/	`/foʊn/&/veɪn/	1/roʊm/1	~/skeɪl/
COLONEL	MANY	FEIGN	AROMA	LAKES
C	A	N	A	L

(Note that the order of operations with ` is a bit counterintuitive. `p&q matches something that is both one letter off from p, and one letter off from q when entered into Qat.)

The indicated letters spell CANAL.

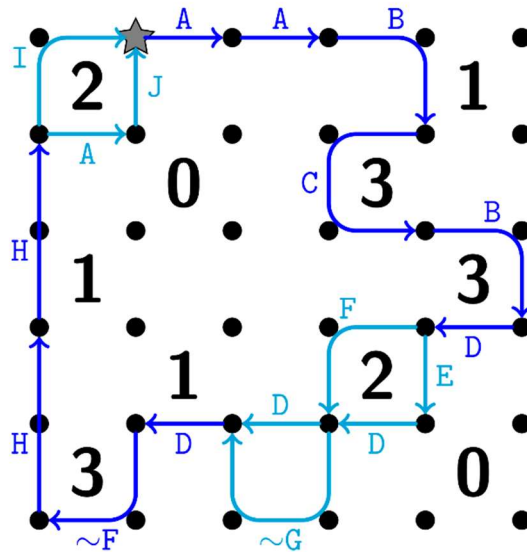
#5, Category Four: This is an *Only QConnect*-style connecting wall. Three out of four members of a well-known set of four can be found on the wall, written in Qat syntax, with variables consistent within a set. The fourth member matches the enumeration of one of the items in the bottom row.

jAry	BoRB	elAine	/karmA	SEINFELD	A = er	B = ge
A	pA	blA	clyde	PAC-MAN GHOSTS	A = inky	
fr~Ahman	sophomore	juB	AB	YEARS OF EDUCATION	A = se	B = nior
adenine	cytosA	#@@#A	####A	NUCLEOBASES	A = ine	

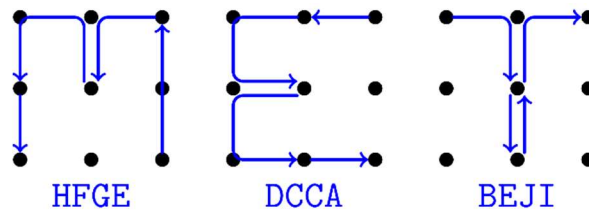
The indicated letters spell ACRE.

#6. Short Cirqat: This is a perfectly ordinary Slitherlink juxtaposed with some confusing Qat notation. But unfortunately, the Slitherlink is not unique! There are three independent sections where the loop can go one of two different ways. Similarly, the mysterious string to its right AABCBD (ED | F) (D | ~G) D~FHH (I | AJ) also consists of three (|) clauses, each of which can be resolved in two ways.

This suggests that the Qat string somehow represents the solutions to the Slitherlink. Indeed, this is a reimagination of Qat in which variables represent sequences of steps, rather than sequences of letters. So now the goal is to determine what steps each variable corresponds to. The line !=ABCDEFGHJIJ is Qat syntax for "the variables ABCDEFGHJIJ are all distinct". Here's the correct identification of the variables:



Once you know each letter's instructions, follow the three sequences to draw the word MET.



FINALE. Qatharsis: This is the meta. We have answers of six distinct lengths matching the query, so we can place them in the corresponding grids and examine the capital letters:

prAise;caNal;Section;backWash;mEt;acRe

The capital letters spell ANSWER, but this is unfortunately not the answer. Capitals in a Qat query are variables, so a natural thing to check is what else these variables can be. Since we want them to still spell an answer, we should enter the final query:

Pattern:

Use dictionary

pr a ise ca n al s ection ba ck w ash m e t ac r e a n s w e r
pr'em ise ca b al el ection ba ck l ash m i s t ac h e e m b e ll i s h

The answer is **EMBELLISH**.

Author's Notes

Jonah: The original idea was to have this be a Catwoman puzzle in round 2. It turned out that zero of those answers are in PDL, and Qat can't handle the final search query with its larger dictionaries. Instead, it's here in round 1, and serves as an introduction to my favorite hunt tool. I hope solvers unfamiliar with Qat before the hunt found an opportunity to use it in later puzzles!

Copyqats: This was inspired by a conversation about (non-Qat) regular expressions that can parse as clues themselves, like `[three]+[seven]`, or `[penultimate][element][possessing]{7}[shells]`. The version here is considerably less constrained!

Dropqats: This idea sprang fully-formed from the silly name pun. I'm curious to see what a larger Dropqat looks like, but I'm reasonably sure it would stop being unique unless you were a lot more sparing in the use of non-letter symbols.

Qat Scan: I don't have any backstory here besides "what if Qat was a word search?" Combine Two Things continues to be an easy and productive model of puzzle design.

Qatcalls: The original extraction idea was to have the answers also extract to phonemes, but it turns out that's a lot harder to solve, and rules out the easier break-in of the homophone example.

Category Four: This puzzle was written solely for the Pacman punchline.

Short Cirqat: The original plan here was to just make a normal unique slitherlink (with the same extraction), but I kept struggling to have a nice antisymmetric grid that gave all the necessary pieces. I'm pretty happy with the ambiguous result.