

# How to Solve Quip-Find™ Puzzles

## How Quipto® Was Invented

Quip-Find™ puzzles are based on the game Quipto®, which uses the surface of a 3x3x3 cube\* as its “playing space.”

In 1970 a young Vermonter had just solved a puzzle with “Soma cubes,” assembling them to form a 3x3x3 cube. While admiring the elegance of this cluster of 27 smaller cubes, he observed that one of them was totally surrounded, “like the core of an apple,” leaving 26 exposed. He wondered: What would happen if you had 26 **letter cubes** – one for each letter of the alphabet, the same letter on all its faces – and you played the letter cubes into the cubicles of a 3x3x3 **rack**? Could you spell out words as a path between cubes that were adjacent on the surface of the rack?

Thus was the 3-D word game Quipto® conceived. The inventor, Jim Rader, soon discovered that it is easy to spell out almost any word in this way – but that it is more challenging to spell out a whole sentence as a single continuous path.

Quip-Find™ puzzles provide the challenge of Quipto® on paper. A quip (a short proverb or quotation) is hidden in a flat diagram of a 3x3x3 cube and the solver tries to find it with the help of a cryptogram.

On the following pages, we will show you how a Quip-Find™ puzzle works, and then we will give you some more detailed suggestions about how to solve them, using a few examples.

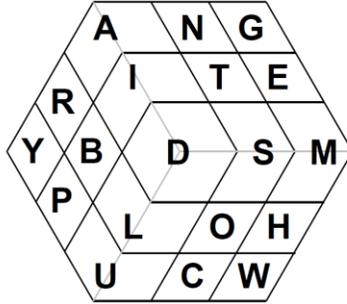
We hope that you enjoy this new kind of word puzzle!

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\*This shape will remind many people of Rubik’s Cube®, but Quipto® was invented **before** Rubik’s Cube and there is no further similarity between that puzzle and Quipto®. Quipto® (which is currently under development) is simpler – and it’s a word game.

## How a Quip-Find™ Puzzle Works

In most Quip-Find™ puzzles, the diagram shows only three adjacent faces of the 3x3x3 cube (or "rack"). To see how words and quips are spelled out in Quip-Find™ puzzles, consider the following diagram:



Two cubicles are adjacent if they touch on the surface of the rack either side-to-side (like "A" and "N" in the diagram above) or corner-to-corner (like "A" and "T"). Words that can be spelled out in the above diagram include OLD, COLD, HOLD, MOLD, and SOLD, but **not** TOLD ("T" is not adjacent to "O") or SOLAR ("L" is not adjacent to "A").

Among the other words that can be spelled out in this diagram are AIN'T, ARRANGE (double letters are always permitted), BAIT, BITE, BITTEN, BULL, COULD, CULL, HOLLOW, LIST, NEST, PLOD, PLOW, PULL, RABID, RAID, RANGE, RATE, RING, SHOULD, SING, SINGE, STAIN, STING, TAIN'T, TEST, and WOULD.

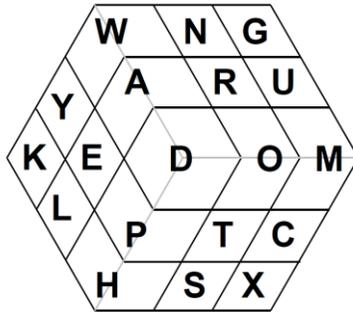
Many other words can be spelled out in the above diagram – even the 28-letter word, ANTIDISESTABLISHMENTARIANISM!

Try tracing the path of each of these words – and any additional words that you may find – until you are confident that you understand how a word is spelled out in Quip-Find™ puzzles.

Each Quip-Find™ puzzle in this book has two parts:

- A **diagram** of three faces of a 3x3x3 cube (or “rack”) where each smaller cube-space (or “cubicle”) has been assigned a different letter of the alphabet. It is in this diagram that the quip is hidden.
- A **cryptogram** where each word of the quip is represented by a set of blanks. The numbers under the blanks stand for the letters in the quip, a different number for each different letter.

An example will illustrate how a Quip-Find™ puzzle works:



1 2    1 3 3 4 5    1  
6 1 7    8 5 5 3 9    10 11 5  
6 12 13 10 12 14    1 15 1 7

This is the same example that we have used on the back cover and in the introduction; the hidden quip is “An apple a day keeps the doctor away.” Trace this saying in the diagram as a continuous path between letters that are adjacent – that touch each other on the surface of the rack, either side-to-side or corner-to-corner.

Notice that the spaces between words and punctuation marks (commas, periods, apostrophes, etc.) are included in the cryptogram, but they are **not** involved in the “spelling out” of the quip on the rack. And notice again (very important!) that **the entire quip is spelled out as a single continuous path.**

Notice that double letters, like the double-“P” in APPLE and the double-“E” in KEEPS, are always possible in a Quip-Find™ puzzle.

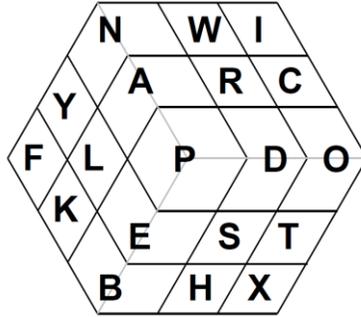
Finally, notice that in the cryptogram each different letter is assigned a different number. When a letter recurs (for example, “A” in AN recurs in APPLE, A, DAY, and AWAY), it is represented by the same number (“1” in this case).

## **What is “Hidden Adjacency”?**

Again, most Quip-Find™ puzzles use only “half” of the Quipto® rack; that is, the diagram in each puzzle shows only three mutually-adjacent faces of the 3x3x3 cube, and the quip is hidden in that “half rack”. (Notice, however, that a “half rack” includes 19 cubicles, not 13 as you might expect.)

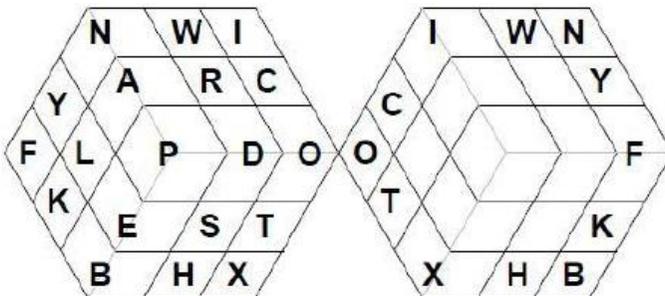
Because we show only three faces of the rack, cubicles that do **not appear** to be adjacent actually **are** adjacent – on a “hidden” side of the rack. This occurs in precisely three cases on any half-rack diagram. In those cases, we refer to the adjacency of the two cubicles as a “hidden adjacency”. Some of the puzzles in this book involve hidden adjacencies; others (including all the puzzles on pages 1-34) do not.

To illustrate, here is a diagram in which the quip “An apple a day keeps the doctor away” is hidden in a manner different from that in the diagram on the previous page:



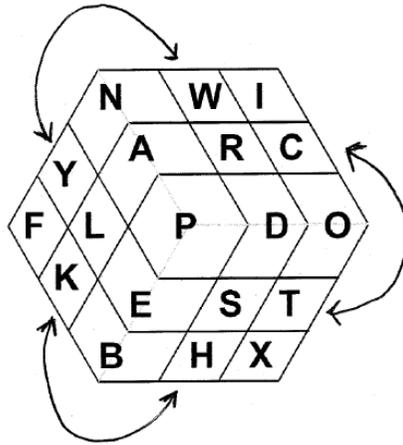
Notice that in this version of the puzzle diagram, "C" and "T" (as in DOCTOR) do not **appear** to be adjacent; however, they actually do touch – on a hidden face of the rack, just as "A" and "E" are adjacent on the opposite visible face. Again, this kind of hidden adjacency occurs at exactly three of the six outer corners of the diagram; in the diagram above, the other hidden adjacencies, besides C-T, are H-K and Y-W.

That these letters are actually adjacent, on the "back side" of the rack, is best shown on a full-rack diagram (which is analogous to a flat map showing both hemispheres of the world), below. The arrows point out the adjacent cubicles where they touch on the "back side."



(Notice that six cubicles on the hidden back side of the rack do not “contain” letters; they are not involved in the puzzle.)

Until you get accustomed to spotting hidden adjacencies, you may want to mark each diagram like this, where the curved arrows connect the letters that are adjacent even though they do not appear to be so:



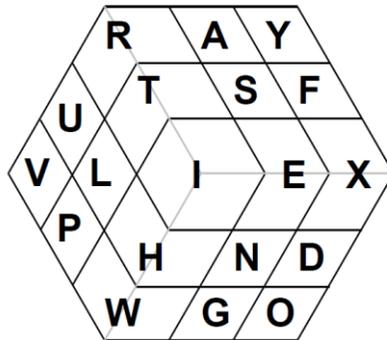
## How to Solve a Qip-Find™ Puzzle

To solve a Qip-Find™ puzzle, work back and forth between the rack diagram and the cryptogram. You may find it helpful to:

- Concentrate on the **short words** in the cryptogram (words of 1, 2, 3 or 4 letters) and try to guess from the context what these words might be.
- Search for **words that can be spelled out in the diagram**, especially those that are the **same length** as words that appear in the cryptogram. You may want to make lists, by word-length, of these words.
- Search in the diagram particularly for **common** short words; for example, among three-letter words, watch for ones like AND, FOR, THE, and YOU that can be found in the diagram.

- Look for words that fit the **pattern** of words in the cryptogram. It may be particularly fruitful to focus on ones that have double-letters or other unusual arrangements – or pairs of words that contain similar patterns of letters.
- Choose a word in the cryptogram for which you can make a **reasonable guess** as to what it might be, and start with that guessed word.
- In general, **use a pencil**, so that you may erase wrong guesses and false starts. Fill in the guessed letters in the cryptogram **and** mark them on the diagram (with a check mark, or with circling or shading) as “used letters.”
- On the basis of the guessed letters, try to **fill in the remaining gaps** in the cryptogram, knowing that **the entire hidden quip is spelled out as a single continuous path** in the diagram.

We will now apply these suggestions in trying to solve a Quip-Find™ puzzle:



1 2 3 1 4      5 6      1 4 7  
6 8 9 7 6 1      10 5 7

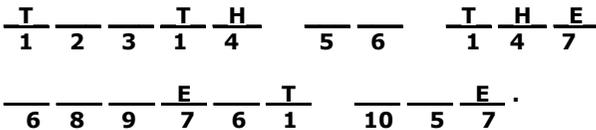
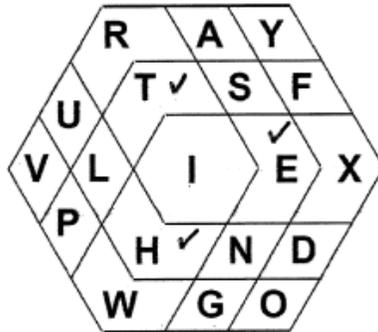
We might begin your solving of this puzzle by making lists of two- and three-letter words that can be spelled out in the diagram. For example, you might find the following words (although these are not exhaustive lists):

**Two-letter words:** AS, AT, DO, GO, IS, IT, NO, ON

**Three-letter words:** ART, ATE, DOG, FAR, FAT, FED, GOD, HEX, HIE, HIS, HIT, LIE, RAT, RAY, SAT, SEX, TAR, THE, TIE, TIN

Perhaps the most common of the words in these lists is THE, which would fit in the cryptogram as either "1-4-7" or "10-5-7." Since THE never occurs as the last word in a sentence, we may choose to try it as the third word, "1-4-7." (Again, we recommend using pencil, so that you may easily erase if this hunch doesn't work out.)

With this guess, and with the used letters checked off on the diagram, our puzzle now looks like this:

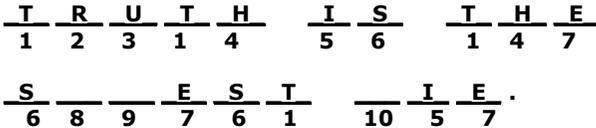
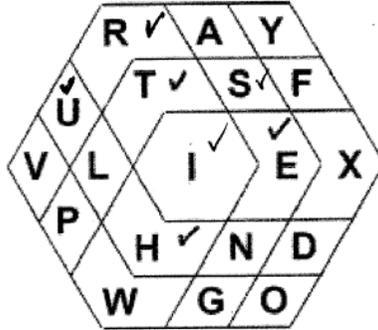


Next, we might try to complete the first word, "T-2-3-T-H," since our guess of THE has given us guesses for three of its five letters. We look for two adjacent letters that are both adjacent to "T". (Remember that the entire hidden quip can be traced as a continuous path.) We

quickly see that the word can only be TILTH or TRUTH, and we conclude that TRUTH is the more likely possibility.

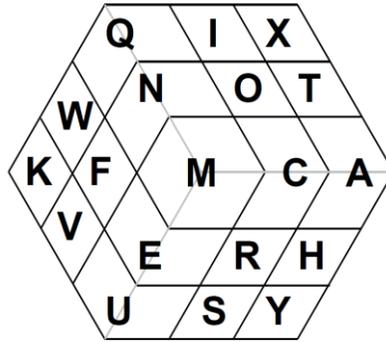
Now we look at the two-letter word, "5-6"; "5" must be adjacent to "H", "6" must be adjacent to "T", and "5" and "6" must be adjacent to one another. Checking our list of two-letter words above, we find only one word that will fit: IS.

We now have:



We have almost finished solving this puzzle. The fourth word, "S-8-9-E-S-T", must clearly be SAFEST, since other sets of two letters linking "S" and "E" do not produce a word. And clearly "10" must be "L"; it is the only unused letter that is adjacent to both "T" and "I".

Here is a new puzzle:



1 2 3 2 4    5 6 1 7 8 9 2  
10 6 11 12 6 1    13 12 11 14  
15 5 11 12 6 1

As you can see by the cryptogram, this hidden quip contains no three-letter words and only one four-letter word. Probably the most fruitful place to start is either (a) the four letter word, "13-12-11-14," or (b) the first word, which has an unusual pattern - "1-2-3-2-4" - where the second letter repeats as the fourth letter. (You may also notice that the third and fifth words end with the same pattern of four letters, "...11-12-6-1," and that the first two of these letters are the same as the middle letters of the four-letter word - but reversed.)

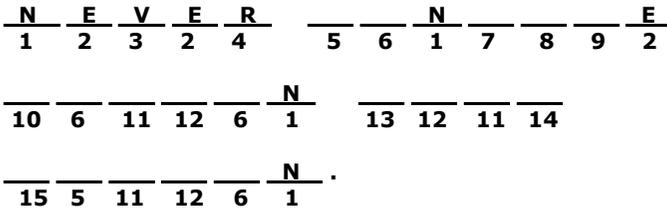
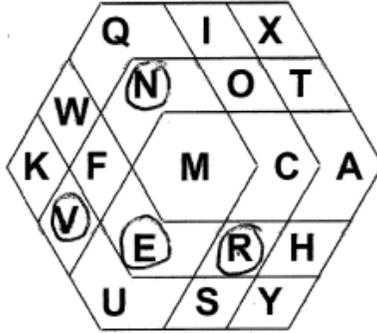
We will start by listing some of the possibilities for (a) and (b):

(a) "**13-12-11-14**": ACME, CARE, CARS, CHAR, CHAT, COAT, COIN, COME, CONE, FURS, FURY, FUSE, HARM, MOAT, MOTH\*, RUSH, TARS, TOME, TONE, WINE\*, WITH\*

(b) "**1-2-3-2-4**": FEVER, NEVER, SEVER

\* indicates that the word involves one or more hidden adjacencies.

NEVER seems the best guess for the first word, so we will start with it. (Again, use pencil, so that you may erase later if needed.) Filling in the letters in the cryptogram and checking them off as used on the diagram (this time, circling the used letters), we get:

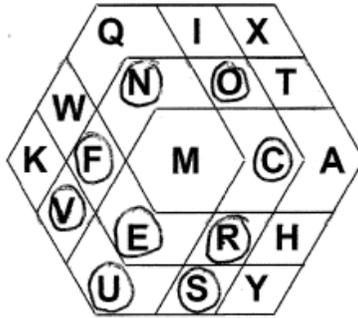


Our guess does not fill in very many blanks in the cryptogram, but it provides us with some gaps that we can try to fill in – again, knowing that the entire hidden quip is spelled out as a continuous path in the diagram. Let’s start with the missing links in the second word, “5-6-N-7-8-9-E” – noting that “5” must be adjacent to “R”, the last letter of the first word.

The first gap could be filled to create a word beginning ACN..., AON..., CMN..., CON..., MCN..., MFN..., and MON...; of these possibilities only ACN..., CON..., and MON... are at all promising. For the second gap, we

find a number of possibilities (for example, ...NCHSE, ...NIOCE, and ...NWFUE) – but only one, ...NFUSE, will complete a word: CONFUSE.

Now we have:



<u>N</u>	<u>E</u>	<u>V</u>	<u>E</u>	<u>R</u>	<u>C</u>	<u>O</u>	<u>N</u>	<u>F</u>	<u>U</u>	<u>S</u>	<u>E</u>
1	2	3	2	4	5	6	1	7	8	9	2
<u>10</u>	<u>O</u>	<u>11</u>	<u>12</u>	<u>O</u>	<u>N</u>	<u>13</u>	<u>12</u>	<u>11</u>	<u>14</u>		
<u>15</u>	<u>C</u>	<u>11</u>	<u>12</u>	<u>O</u>	<u>N</u>						
15	5	11	12	6	1						

Checking the updated diagram, we see that there is only one letter adjacent to "E" that has not been used – so "10" has to be "M". Looking at the options for the third word (now "M-O-11-12-O-N"), we readily conclude that it must be MOTION.

Now if we check our list of four-letter words (above), we see that the fourth word (if we have not already guessed it from the context) can only be WITH. (And notice again that this word involves hidden adjacencies – in fact, two of them.) The rest of the solution of this puzzle is now a breeze.

## A Special Note about “Two-Quip” Puzzles

There are five puzzles in this book (on pages 72, 73, 89, 90, and 101) that have **two** separate but related quips in one puzzle. In each case, one quip is labeled “(1)” and the other “(2)”.

A special rule applies to these puzzles: The last letter of (1) is **not necessarily** adjacent to the first letter of (2). Thus the two quips involve two separate continuous paths, one for each quip; they do not necessarily involve a **single** continuous path, as all of the single-quip puzzles do.