


# SeedPicker

SeedPicker is a package consisting of a step-by-step guide (this document), and a small script. The SeedPicker guide helps you generate your own 24 word BIP39 seed phrase, with transparent randomness and a trustless computer environment. By creating randomness from physical objects (raffle tickets and one 6-sided die), the user can convince himself/herself that no hacker can influence the randomness or the resulting seed.

The accompanying script calculates the 24th word of the seed, and the instructions make sure the script is run in a completely secure environment.

*This guide aims to educate the reader about security practices in a learning-by-doing fashion. It does not make any guarantees or promises, and obviously cannot take any responsibilities whatsoever regarding how the reader chooses to use it.*

## What you need

- A PC or laptop capable of running Ubuntu. Almost any old computer will do. A hard drive is NOT needed.
- A CD or a USB Stick prepared with Ubuntu Live. CD is recommended (usually easier for newbies, and completely read-only). If you haven't created one of those before, the following tutorial is a good starting point: [bit.ly/2QD8mjC](http://bit.ly/2QD8mjC)
- A printer.
- A pair of scissors.
- A single 6-sided die 
- A small bag or box to put the raffle tickets in. An ordinary plastic bag works fine.
- A printout of this pdf. This is really important!!! **Print this pdf now and continue reading from the printout.** (The only parts that absolutely unconditionally have to be printed are the Seed Form and the Raffle Tickets, but it is recommended that you print the whole pdf)

## Part 1: Generation of 23 random words

Human beings are really bad at randomness! When randomness is important, you should never rely on something that comes from your brain! Modern computers are slowly getting better at randomness, but it is still difficult to make computerized randomness transparent. In other words, it is hard to convince humans that a random number has been created in a truly random fashion. This is the reason most public lotteries use physical and transparent lotto machines instead of using computerized randomness; It is crucial to convince the audience that the randomness is real and not manipulated in any way.

This guide uses a combination of raffle tickets and a six-sided playing die to create very good natural transparent randomness. This is how you do it:

1. Use the scissors to cut out the 342 raffle tickets and put them in the bag (or box). Make sure you don't lose any of them. Mix them around thoroughly!
2. Use the Seed form, the raffle tickets, and the 6-sided die to draw the first 23 words. Read the instructions on the Seed Form carefully, and make sure to follow them all.
3. You should now have a sheet of paper with 23 secret words, generated with a very high degree of randomness. Randomness that you yourself have witnessed and controlled. Don't ever let anybody see what you have written on your Seed Form!

## Part 2: Calculating the 24th word

The last word of a 24 word seed is a checksum word, calculated using the other 23 words. Unfortunately, we need to use a computer for this step. Since we need to enter our super secret 23 words into a computer, it must be a super secure computer! It must be offline and we must make sure all the secret data is completely discarded after shutdown. Follow the steps below to achieve this!

Note that we don't have to trust any of the software that downloaded here! No hacker can change the 23 words that we generated in the previous step. However, we do have to make sure that the secret information will not leak to the outside world, or to future users of the same computer.

### 2a: Prepare hardware and software

1. Open up the computer and **remove the hard drive**. This step is to convince you that Ubuntu Live will not save anything to the hard drive. If you feel certain that this will not happen, you can skip this step.
2. Remove any removable media from the computer.
3. Boot up Ubuntu and run it in Live mode ("Try Ubuntu before installing").
4. Make sure you have a working Internet connection, wired or wireless (Click the small triangle on the top right of your screen).
5. Open Terminal (Press the Windows key and start typing "terminal", then click the Terminal icon)
6. Our first commands will install the python dependency manager **pip3**.

```
sudo apt-get update ↵
```

```
sudo apt-get install python3-pip ↵ Answer Y at the prompt
```

*(This may take a few minutes)*

7. Then we use pip3 to install the library **mnemonic** (A utility library written by Trezor):
8. Using the command **wget**, download the SeedPicker python script called **lastword.py**. It utilizes the **mnemonic** library to calculate the last word.

```
wget -O lastword.py http://bit.ly/lastword_py ↵
```

*(That's the capital letter O after wget, not a zero)*

### 2b: Disable all communication

We now have prepared the hardware and installed all required software. The next step is to go completely offline:

1. Pull any network cable.
2. Disable all wireless communication (e.g. by enabling airplane mode).
3. Make absolutely sure you are now offline, and from now on: **Don't go online again until after you have restarted the computer!!**
4. Make sure nobody else can see your screen!
5. Make sure nobody else can see your keyboard!
6. Make sure nobody else can see your Seed Form!

## 2c: Run the script

1. In the same terminal window as earlier, type `python3 lastword.py` followed by all your 23 secret words (space separated):  
`python3 lastword.py word1 word2 word3 word4 ... word23` ↵
2. When the script has calculated your 24th word, use your pen to type it into the designated cell of the Seed Form.
3. Shutdown the computer as soon as possible.

You have now generated a valid BIP39 seed phrase and the only record of it is the Seed Form. Keep it really secret. You may want to make copies and put in different locations.

This guide does not cover how to store your seed phrase securely, so do your research well.

If you intend to use the seed phrase with a hardware wallet, it is recommended to use the **passphrase** feature (sometimes called **the 25th word**) and keep the two phrases separated.

*Comments or suggestions?*

Visit [github.com/merland/seedpicker](https://github.com/merland/seedpicker) or send an email to [seedpicker@megabit.se](mailto:seedpicker@megabit.se)

*Thanks!*

Seedpicker Seed form - Keep secret at all times!

WARNING! Read instructions carefully!

Never fill this form on a computer! You must print the document and use a pen or pencil.

- As soon as you start writing on this printout, you must keep it secret forever!
- Make sure nobody can see which tickets you draw!
- Make sure nobody can see what you are writing!
- Make sure your writing does not transfer to the surface below!

If you - at any point - suspect that any of the above is not fulfilled, start over from a new printout!

You need **this printout**, the 342 raffle tickets (T1-T342), a **six-sided die** and the **SeedPicker lookup table**.  
Follow the instructions below, line by line. Fill in the empty cells  
Mix the raffle tickets well between each draw!

		Ticket (T1-T342)		Die Roll (1-6)		Mnemonic word (from lookup table)	
1	Draw a ticket →	T	Put the ticket back. Roll the die →		Find word that matches ticket and roll →		1
2	Draw a ticket →	T	Put the ticket back. Roll the die →		Find word that matches ticket and roll →		2
3	Draw a ticket →	T	Put the ticket back. Roll the die →		Find word that matches ticket and roll →		3
4	Draw a ticket →	T	Put the ticket back. Roll the die →		Find word that matches ticket and roll →		4
5	Draw a ticket →	T	Put the ticket back. Roll the die →		Find word that matches ticket and roll →		5
6	Draw a ticket →	T	Put the ticket back. Roll the die →		Find word that matches ticket and roll →		6
7	Draw a ticket →	T	Put the ticket back. Roll the die →		Find word that matches ticket and roll →		7
8	Draw a ticket →	T	Put the ticket back. Roll the die →		Find word that matches ticket and roll →		8
9	Draw a ticket →	T	Put the ticket back. Roll the die →		Find word that matches ticket and roll →		9
10	Draw a ticket →	T	Put the ticket back. Roll the die →		Find word that matches ticket and roll →		10
11	Draw a ticket →	T	Put the ticket back. Roll the die →		Find word that matches ticket and roll →		11
12	Draw a ticket →	T	Put the ticket back. Roll the die →		Find word that matches ticket and roll →		12
13	Draw a ticket →	T	Put the ticket back. Roll the die →		Find word that matches ticket and roll →		13
14	Draw a ticket →	T	Put the ticket back. Roll the die →		Find word that matches ticket and roll →		14
15	Draw a ticket →	T	Put the ticket back. Roll the die →		Find word that matches ticket and roll →		15
16	Draw a ticket →	T	Put the ticket back. Roll the die →		Find word that matches ticket and roll →		16
17	Draw a ticket →	T	Put the ticket back. Roll the die →		Find word that matches ticket and roll →		17
18	Draw a ticket →	T	Put the ticket back. Roll the die →		Find word that matches ticket and roll →		18
19	Draw a ticket →	T	Put the ticket back. Roll the die →		Find word that matches ticket and roll →		19
20	Draw a ticket →	T	Put the ticket back. Roll the die →		Find word that matches ticket and roll →		20
21	Draw a ticket →	T	Put the ticket back. Roll the die →		Find word that matches ticket and roll →		21
22	Draw a ticket →	T	Put the ticket back. Roll the die →		Find word that matches ticket and roll →		22
23	Draw a ticket →	T	Put the ticket back. Roll the die →		Find word that matches ticket and roll →		23
24	The 24th word is a checksum word, calculated using the other 23. Make sure this printout is kept hidden and then follow the instructions in Part 2 to calculate the 24th word. When finished, write it here →						24

*Cut out all 342 tickets, following the lines as closely as possible.*

*Put the tickets in a small bag or box and mix them really well.*

**T1-T171**

T1	T2	T3	T4	T5	T6	T7	T8	T9
T10	T11	T12	T13	T14	T15	T16	T17	T18
T19	T20	T21	T22	T23	T24	T25	T26	T27
T28	T29	T30	T31	T32	T33	T34	T35	T36
T37	T38	T39	T40	T41	T42	T43	T44	T45
T46	T47	T48	T49	T50	T51	T52	T53	T54
T55	T56	T57	T58	T59	T60	T61	T62	T63
T64	T65	T66	T67	T68	T69	T70	T71	T72
T73	T74	T75	T76	T77	T78	T79	T81	T81
T82	T83	T84	T85	T86	T87	T88	T89	T90
T91	T92	T93	T94	T95	T96	T97	T98	T99
T100	T101	T102	T103	T104	T105	T106	T107	T108
T109	T110	T111	T112	T113	T114	T115	T116	T117
T118	T119	T120	T121	T122	T123	T124	T125	T126
T127	T128	T129	T130	T131	T132	T133	T134	T135
T136	T137	T138	T139	T140	T141	T142	T143	T144
T145	T146	T147	T148	T149	T150	T151	T152	T153
T154	T155	T156	T157	T158	T159	T160	T161	T162
T163	T164	T165	T166	T167	T168	T169	T170	T171

*Cut out all 342 tickets, following the lines as closely as possible.  
Put the tickets in a small bag or box and mix them really well.*

**T172-T342**

T172	T173	T174	T175	T176	T177	T178	T179	T180
T181	T182	T183	T184	T185	T186	T187	T188	T189
T190	T191	T192	T193	T194	T195	T196	T197	T198
T199	T200	T201	T202	T203	T204	T205	T206	T207
T208	T209	T210	T211	T212	T213	T214	T215	T216
T217	T218	T219	T220	T221	T222	T223	T224	T225
T226	T227	T228	T229	T230	T31	T232	T233	T234
T235	T236	T237	T238	T239	T240	T241	T242	T243
T244	T245	T246	T247	T248	T249	T250	T251	T252
T253	T254	T255	T256	T257	T258	T259	T260	T261
T262	T263	T264	T265	T266	T267	T268	T269	T270
T271	T272	T273	T274	T275	T276	T277	T278	T279
T280	T281	T282	T283	T284	T285	T286	T287	T288
T289	T290	T291	T292	T293	T294	T295	T296	T297
T298	T299	T300	T301	T302	T303	T304	T305	T306
T307	T308	T309	T310	T311	T312	T313	T314	T315
T316	T317	T318	T319	T320	T321	T322	T323	T324
T325	T326	T327	T328	T329	T330	T331	T332	T333
T334	T335	T336	T337	T338	T339	T340	T341	T342

## SeedPicker Lookup Table

Draw one ticket → Roll the six sided die → lookup the word and write it on the seed form → Repeat 23 times.						
Do not use a computer of any kind to note the results! Use paper only and keep it hidden/secret.						
If you use this list on a computer, do not use Ctrl-F or similar to find your words (your keystrokes may leak)						
You should validate that this table corresponds to the official word list. Google "BIP39 wordlist" and make sure the words below have the official numbers						
Drawn Ticket	Die roll result					
	1	2	3	4	5	6
T1	1 / abandon	2 / ability	3 / able	4 / about	5 / above	6 / absent
T2	7 / absorb	8 / abstract	9 / absurd	10 / abuse	11 / access	12 / accident
T3	13 / account	14 / accuse	15 / achieve	16 / acid	17 / acoustic	18 / acquire
T4	19 / across	20 / act	21 / action	22 / actor	23 / actress	24 / actual
T5	25 / adapt	26 / add	27 / addict	28 / address	29 / adjust	30 / admit
T6	31 / adult	32 / advance	33 / advice	34 / aerobic	35 / affair	36 / afford
T7	37 / afraid	38 / again	39 / age	40 / agent	41 / agree	42 / ahead
T8	43 / aim	44 / air	45 / airport	46 / aisle	47 / alarm	48 / album
T9	49 / alcohol	50 / alert	51 / alien	52 / all	53 / alley	54 / allow
T10	55 / almost	56 / alone	57 / alpha	58 / already	59 / also	60 / alter
T11	61 / always	62 / amateur	63 / amazing	64 / among	65 / amount	66 / amused
T12	67 / analyst	68 / anchor	69 / ancient	70 / anger	71 / angle	72 / angry
T13	73 / animal	74 / ankle	75 / announce	76 / annual	77 / another	78 / answer
T14	79 / antenna	80 / antique	81 / anxiety	82 / any	83 / apart	84 / apology
T15	85 / appear	86 / apple	87 / approve	88 / april	89 / arch	90 / arctic
T16	91 / area	92 / arena	93 / argue	94 / arm	95 / armed	96 / armor
T17	97 / army	98 / around	99 / arrange	100 / arrest	101 / arrive	102 / arrow
T18	103 / art	104 / artefact	105 / artist	106 / artwork	107 / ask	108 / aspect
T19	109 / assault	110 / asset	111 / assist	112 / assume	113 / asthma	114 / athlete
T20	115 / atom	116 / attack	117 / attend	118 / attitude	119 / attract	120 / auction
T21	121 / audit	122 / august	123 / aunt	124 / author	125 / auto	126 / autumn
T22	127 / average	128 / avocado	129 / avoid	130 / awake	131 / aware	132 / away
T23	133 / awesome	134 / awful	135 / awkward	136 / axis	137 / baby	138 / bachelor
T24	139 / bacon	140 / badge	141 / bag	142 / balance	143 / balcony	144 / ball
T25	145 / bamboo	146 / banana	147 / banner	148 / bar	149 / barely	150 / bargain
T26	151 / barrel	152 / base	153 / basic	154 / basket	155 / battle	156 / beach
T27	157 / bean	158 / beauty	159 / because	160 / become	161 / beef	162 / before
T28	163 / begin	164 / behave	165 / behind	166 / believe	167 / below	168 / belt
T29	169 / bench	170 / benefit	171 / best	172 / betray	173 / better	174 / between
T30	175 / beyond	176 / bicycle	177 / bid	178 / bike	179 / bind	180 / biology
T31	181 / bird	182 / birth	183 / bitter	184 / black	185 / blade	186 / blame
T32	187 / blanket	188 / blast	189 / bleak	190 / bless	191 / blind	192 / blood
T33	193 / blossom	194 / blouse	195 / blue	196 / blur	197 / blush	198 / board
T34	199 / boat	200 / body	201 / boil	202 / bomb	203 / bone	204 / bonus
T35	205 / book	206 / boost	207 / border	208 / boring	209 / borrow	210 / boss
T36	211 / bottom	212 / bounce	213 / box	214 / boy	215 / bracket	216 / brain
T37	217 / brand	218 / brass	219 / brave	220 / bread	221 / breeze	222 / brick
T38	223 / bridge	224 / brief	225 / bright	226 / bring	227 / brisk	228 / broccoli
T39	229 / broken	230 / bronze	231 / broom	232 / brother	233 / brown	234 / brush
T40	235 / bubble	236 / buddy	237 / budget	238 / buffalo	239 / build	240 / bulb
T41	241 / bulk	242 / bullet	243 / bundle	244 / bunker	245 / burden	246 / burger
T42	247 / burst	248 / bus	249 / business	250 / busy	251 / butter	252 / buyer
T43	253 / buzz	254 / cabbage	255 / cabin	256 / cable	257 / cactus	258 / cage
T44	259 / cake	260 / call	261 / calm	262 / camera	263 / camp	264 / can
T45	265 / canal	266 / cancel	267 / candy	268 / cannon	269 / canoe	270 / canvas
T46	271 / canyon	272 / capable	273 / capital	274 / captain	275 / car	276 / carbon
T47	277 / card	278 / cargo	279 / carpet	280 / carry	281 / cart	282 / case
T48	283 / cash	284 / casino	285 / castle	286 / casual	287 / cat	288 / catalog
T49	289 / catch	290 / category	291 / cattle	292 / caught	293 / cause	294 / caution
T50	295 / cave	296 / ceiling	297 / celery	298 / cement	299 / census	300 / century
T51	301 / cereal	302 / certain	303 / chair	304 / chalk	305 / champion	306 / change
T52	307 / chaos	308 / chapter	309 / charge	310 / chase	311 / chat	312 / cheap
T53	313 / check	314 / cheese	315 / chef	316 / cherry	317 / chest	318 / chicken
T54	319 / chief	320 / child	321 / chimney	322 / choice	323 / choose	324 / chronic
T55	325 / chuckle	326 / chunk	327 / churn	328 / cigar	329 / cinnamon	330 / circle
T56	331 / citizen	332 / city	333 / civil	334 / claim	335 / clap	336 / clarify
T57	337 / claw	338 / clay	339 / clean	340 / clerk	341 / clever	342 / click
T58	343 / client	344 / cliff	345 / climb	346 / clinic	347 / clip	348 / clock
T59	349 / clog	350 / close	351 / cloth	352 / cloud	353 / clown	354 / club
T60	355 / clump	356 / cluster	357 / clutch	358 / coach	359 / coast	360 / coconut
T61	361 / code	362 / coffee	363 / coil	364 / coin	365 / collect	366 / color
T62	367 / column	368 / combine	369 / come	370 / comfort	371 / comic	372 / common
T63	373 / company	374 / concert	375 / conduct	376 / confirm	377 / congress	378 / connect
T64	379 / consider	380 / control	381 / convince	382 / cook	383 / cool	384 / copper
T65	385 / copy	386 / coral	387 / core	388 / corn	389 / correct	390 / cost
T66	391 / cotton	392 / couch	393 / country	394 / couple	395 / course	396 / cousin
T67	397 / cover	398 / coyote	399 / crack	400 / cradle	401 / craft	402 / cram
T68	403 / crane	404 / crash	405 / crater	406 / crawl	407 / crazy	408 / cream
T69	409 / credit	410 / creek	411 / crew	412 / cricket	413 / crime	414 / crisp
T70	415 / critic	416 / crop	417 / cross	418 / crouch	419 / crowd	420 / crucial
T71	421 / cruel	422 / cruise	423 / crumble	424 / crunch	425 / crush	426 / cry
T72	427 / crystal	428 / cube	429 / culture	430 / cup	431 / cupboard	432 / curious

SeedPicker Lookup Table

Draw one ticket → Roll the six sided die → lookup the word and write it on the seed form → Repeat 23 times.						
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If you use this list on a computer, do not use Ctrl-F or similar to find your words (your keystrokes may leak)						
You should validate that this table corresponds to the official word list. Google "BIP39 wordlist" and make sure the words below have the official numbers						
	Die roll result					
Drawn Ticket	1	2	3	4	5	6
T73	433 / current	434 / curtain	435 / curve	436 / cushion	437 / custom	438 / cute
T74	439 / cycle	440 / dad	441 / damage	442 / damp	443 / dance	444 / danger
T75	445 / daring	446 / dash	447 / daughter	448 / dawn	449 / day	450 / deal
T76	451 / debate	452 / debris	453 / decade	454 / december	455 / decide	456 / decline
T77	457 / decorate	458 / decrease	459 / deer	460 / defense	461 / define	462 / defy
T78	463 / degree	464 / delay	465 / deliver	466 / demand	467 / demise	468 / denial
T79	469 / dentist	470 / deny	471 / depart	472 / depend	473 / deposit	474 / depth
T80	475 / deputy	476 / derive	477 / describe	478 / desert	479 / design	480 / desk
T81	481 / despair	482 / destroy	483 / detail	484 / detect	485 / develop	486 / device
T82	487 / devote	488 / diagram	489 / dial	490 / diamond	491 / diary	492 / dice
T83	493 / diesel	494 / diet	495 / differ	496 / digital	497 / dignity	498 / dilemma
T84	499 / dinner	500 / dinosaur	501 / direct	502 / dirt	503 / disagree	504 / discover
T85	505 / disease	506 / dish	507 / dismiss	508 / disorder	509 / display	510 / distance
T86	511 / divert	512 / divide	513 / divorce	514 / dizzy	515 / doctor	516 / document
T87	517 / dog	518 / doll	519 / dolphin	520 / domain	521 / donate	522 / donkey
T88	523 / donor	524 / door	525 / dose	526 / double	527 / dove	528 / draft
T89	529 / dragon	530 / drama	531 / drastic	532 / draw	533 / dream	534 / dress
T90	535 / drift	536 / drill	537 / drink	538 / drip	539 / drive	540 / drop
T91	541 / drum	542 / dry	543 / duck	544 / dumb	545 / dune	546 / during
T92	547 / dust	548 / dutch	549 / duty	550 / dwarf	551 / dynamic	552 / eager
T93	553 / eagle	554 / early	555 / earn	556 / earth	557 / easily	558 / east
T94	559 / easy	560 / echo	561 / ecology	562 / economy	563 / edge	564 / edit
T95	565 / educate	566 / effort	567 / egg	568 / eight	569 / either	570 / elbow
T96	571 / elder	572 / electric	573 / elegant	574 / element	575 / elephant	576 / elevator
T97	577 / elite	578 / else	579 / embark	580 / embody	581 / embrace	582 / emerge
T98	583 / emotion	584 / employ	585 / empower	586 / empty	587 / enable	588 / enact
T99	589 / end	590 / endless	591 / endorse	592 / enemy	593 / energy	594 / enforce
T100	595 / engage	596 / engine	597 / enhance	598 / enjoy	599 / enlist	600 / enough
T101	601 / enrich	602 / enroll	603 / ensure	604 / enter	605 / entire	606 / entry
T102	607 / envelope	608 / episode	609 / equal	610 / equip	611 / era	612 / erase
T103	613 / erode	614 / erosion	615 / error	616 / erupt	617 / escape	618 / essay
T104	619 / essence	620 / estate	621 / eternal	622 / ethics	623 / evidence	624 / evil
T105	625 / evoke	626 / evolve	627 / exact	628 / example	629 / excess	630 / exchange
T106	631 / excite	632 / exclude	633 / excuse	634 / execute	635 / exercise	636 / exhaust
T107	637 / exhibit	638 / exile	639 / exist	640 / exit	641 / exotic	642 / expand
T108	643 / expect	644 / expire	645 / explain	646 / expose	647 / express	648 / extend
T109	649 / extra	650 / eye	651 / eyebrow	652 / fabric	653 / face	654 / faculty
T110	655 / fade	656 / faint	657 / faith	658 / fall	659 / false	660 / fame
T111	661 / family	662 / famous	663 / fan	664 / fancy	665 / fantasy	666 / farm
T112	667 / fashion	668 / fat	669 / fatal	670 / father	671 / fatigue	672 / fault
T113	673 / favorite	674 / feature	675 / february	676 / federal	677 / fee	678 / feed
T114	679 / feel	680 / female	681 / fence	682 / festival	683 / fetch	684 / fever
T115	685 / few	686 / fiber	687 / fiction	688 / field	689 / figure	690 / file
T116	691 / film	692 / filter	693 / final	694 / find	695 / fine	696 / finger
T117	697 / finish	698 / fire	699 / firm	700 / first	701 / fiscal	702 / fish
T118	703 / fit	704 / fitness	705 / fix	706 / flag	707 / flame	708 / flash
T119	709 / flat	710 / flavor	711 / flee	712 / flight	713 / flip	714 / float
T120	715 / flock	716 / floor	717 / flower	718 / fluid	719 / flush	720 / fly
T121	721 / foam	722 / focus	723 / fog	724 / foil	725 / fold	726 / follow
T122	727 / food	728 / foot	729 / force	730 / forest	731 / forget	732 / fork
T123	733 / fortune	734 / forum	735 / forward	736 / fossil	737 / foster	738 / found
T124	739 / fox	740 / fragile	741 / frame	742 / frequent	743 / fresh	744 / friend
T125	745 / fringe	746 / frog	747 / front	748 / frost	749 / frown	750 / frozen
T126	751 / fruit	752 / fuel	753 / fun	754 / funny	755 / furnace	756 / fury
T127	757 / future	758 / gadget	759 / gain	760 / galaxy	761 / gallery	762 / game
T128	763 / gap	764 / garage	765 / garbage	766 / garden	767 / garlic	768 / garment
T129	769 / gas	770 / gasp	771 / gate	772 / gather	773 / gauge	774 / gaze
T130	775 / general	776 / genius	777 / genre	778 / gentle	779 / genuine	780 / gesture
T131	781 / ghost	782 / giant	783 / gift	784 / giggle	785 / ginger	786 / giraffe
T132	787 / girl	788 / give	789 / glad	790 / glance	791 / glare	792 / glass
T133	793 / glide	794 / glimpse	795 / globe	796 / gloom	797 / glory	798 / glove
T134	799 / glow	800 / glue	801 / goat	802 / goddess	803 / gold	804 / good
T135	805 / goose	806 / gorilla	807 / gospel	808 / gossip	809 / govern	810 / gown
T136	811 / grab	812 / grace	813 / grain	814 / grant	815 / grape	816 / grass
T137	817 / gravity	818 / great	819 / green	820 / grid	821 / grief	822 / grit
T138	823 / grocery	824 / group	825 / grow	826 / grunt	827 / guard	828 / guess
T139	829 / guide	830 / guilt	831 / guitar	832 / gun	833 / gym	834 / habit
T140	835 / hair	836 / half	837 / hammer	838 / hamster	839 / hand	840 / happy
T141	841 / harbor	842 / hard	843 / harsh	844 / harvest	845 / hat	846 / have
T142	847 / hawk	848 / hazard	849 / head	850 / health	851 / heart	852 / heavy
T143	853 / hedgehog	854 / height	855 / hello	856 / helmet	857 / help	858 / hen
T144	859 / hero	860 / hidden	861 / high	862 / hill	863 / hint	864 / hip



## SeedPicker Lookup Table

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	Die roll result					
Drawn Ticket	1	2	3	4	5	6
T145	865 / hire	866 / history	867 / hobby	868 / hockey	869 / hold	870 / hole
T146	871 / holiday	872 / hollow	873 / home	874 / honey	875 / hood	876 / hope
T147	877 / horn	878 / horror	879 / horse	880 / hospital	881 / host	882 / hotel
T148	883 / hour	884 / hover	885 / hub	886 / huge	887 / human	888 / humble
T149	889 / humor	890 / hundred	891 / hungry	892 / hunt	893 / hurdle	894 / hurry
T150	895 / hurt	896 / husband	897 / hybrid	898 / ice	899 / icon	900 / idea
T151	901 / identify	902 / idle	903 / ignore	904 / ill	905 / illegal	906 / illness
T152	907 / image	908 / imitate	909 / immense	910 / immune	911 / impact	912 / impose
T153	913 / improve	914 / impulse	915 / inch	916 / include	917 / income	918 / increase
T154	919 / index	920 / indicate	921 / indoor	922 / industry	923 / infant	924 / inflict
T155	925 / inform	926 / inhale	927 / inherit	928 / initial	929 / inject	930 / injury
T156	931 / inmate	932 / inner	933 / innocent	934 / input	935 / inquiry	936 / insane
T157	937 / insect	938 / inside	939 / inspire	940 / install	941 / intact	942 / interest
T158	943 / into	944 / invest	945 / invite	946 / involve	947 / iron	948 / island
T159	949 / isolate	950 / issue	951 / item	952 / ivory	953 / jacket	954 / jaguar
T160	955 / jar	956 / jazz	957 / jealous	958 / jeans	959 / jelly	960 / jewel
T161	961 / job	962 / join	963 / joke	964 / journey	965 / joy	966 / judge
T162	967 / juice	968 / jump	969 / jungle	970 / junior	971 / junk	972 / just
T163	973 / kangaroo	974 / keen	975 / keep	976 / ketchup	977 / key	978 / kick
T164	979 / kid	980 / kidney	981 / kind	982 / kingdom	983 / kiss	984 / kit
T165	985 / kitchen	986 / kite	987 / kitten	988 / kiwi	989 / knee	990 / knife
T166	991 / knock	992 / know	993 / lab	994 / label	995 / labor	996 / ladder
T167	997 / lady	998 / lake	999 / lamp	1000 / language	1001 / laptop	1002 / large
T168	1003 / later	1004 / latin	1005 / laugh	1006 / laundry	1007 / lava	1008 / law
T169	1009 / lawn	1010 / lawsuit	1011 / layer	1012 / lazy	1013 / leader	1014 / leaf
T170	1015 / learn	1016 / leave	1017 / lecture	1018 / left	1019 / leg	1020 / legal
T171	1021 / legend	1022 / leisure	1023 / lemon	1024 / lend	1025 / length	1026 / lens
T172	1027 / leopard	1028 / lesson	1029 / letter	1030 / level	1031 / liar	1032 / liberty
T173	1033 / library	1034 / license	1035 / life	1036 / lift	1037 / light	1038 / like
T174	1039 / limb	1040 / limit	1041 / link	1042 / lion	1043 / liquid	1044 / list
T175	1045 / little	1046 / live	1047 / lizard	1048 / load	1049 / loan	1050 / lobster
T176	1051 / local	1052 / lock	1053 / logic	1054 / lonely	1055 / long	1056 / loop
T177	1057 / lottery	1058 / loud	1059 / lounge	1060 / love	1061 / loyal	1062 / lucky
T178	1063 / luggage	1064 / lumber	1065 / lunar	1066 / lunch	1067 / luxury	1068 / lyrics
T179	1069 / machine	1070 / mad	1071 / magic	1072 / magnet	1073 / maid	1074 / mail
T180	1075 / main	1076 / major	1077 / make	1078 / mammal	1079 / man	1080 / manage
T181	1081 / mandate	1082 / mango	1083 / mansion	1084 / manual	1085 / maple	1086 / marble
T182	1087 / March	1088 / margin	1089 / marine	1090 / market	1091 / marriage	1092 / mask
T183	1093 / mass	1094 / master	1095 / match	1096 / material	1097 / math	1098 / matrix
T184	1099 / matter	1100 / maximum	1101 / maze	1102 / meadow	1103 / mean	1104 / measure
T185	1105 / meat	1106 / mechanic	1107 / medal	1108 / media	1109 / melody	1110 / melt
T186	1111 / member	1112 / memory	1113 / mention	1114 / menu	1115 / mercy	1116 / merge
T187	1117 / merit	1118 / merry	1119 / mesh	1120 / message	1121 / metal	1122 / method
T188	1123 / middle	1124 / midnight	1125 / milk	1126 / million	1127 / mimic	1128 / mind
T189	1129 / minimum	1130 / minor	1131 / minute	1132 / miracle	1133 / mirror	1134 / misery
T190	1135 / miss	1136 / mistake	1137 / mix	1138 / mixed	1139 / mixture	1140 / mobile
T191	1141 / model	1142 / modify	1143 / mom	1144 / moment	1145 / monitor	1146 / monkey
T192	1147 / monster	1148 / month	1149 / moon	1150 / moral	1151 / more	1152 / morning
T193	1153 / mosquito	1154 / mother	1155 / motion	1156 / motor	1157 / mountain	1158 / mouse
T194	1159 / move	1160 / movie	1161 / much	1162 / muffin	1163 / mule	1164 / multiply
T195	1165 / muscle	1166 / museum	1167 / mushroom	1168 / music	1169 / must	1170 / mutual
T196	1171 / myself	1172 / mystery	1173 / myth	1174 / naive	1175 / name	1176 / napkin
T197	1177 / narrow	1178 / nasty	1179 / nation	1180 / nature	1181 / near	1182 / neck
T198	1183 / need	1184 / negative	1185 / neglect	1186 / neither	1187 / nephew	1188 / nerve
T199	1189 / nest	1190 / net	1191 / network	1192 / neutral	1193 / never	1194 / news
T200	1195 / next	1196 / nice	1197 / night	1198 / noble	1199 / noise	1200 / nominee
T201	1201 / noodle	1202 / normal	1203 / north	1204 / nose	1205 / notable	1206 / note
T202	1207 / nothing	1208 / notice	1209 / novel	1210 / now	1211 / nuclear	1212 / number
T203	1213 / nurse	1214 / nut	1215 / oak	1216 / obey	1217 / object	1218 / oblige
T204	1219 / obscure	1220 / observe	1221 / obtain	1222 / obvious	1223 / occur	1224 / ocean
T205	1225 / October	1226 / odor	1227 / off	1228 / offer	1229 / office	1230 / often
T206	1231 / oil	1232 / okay	1233 / old	1234 / olive	1235 / olympic	1236 / omit
T207	1237 / once	1238 / one	1239 / onion	1240 / online	1241 / only	1242 / open
T208	1243 / opera	1244 / opinion	1245 / oppose	1246 / option	1247 / orange	1248 / orbit
T209	1249 / orchard	1250 / order	1251 / ordinary	1252 / organ	1253 / orient	1254 / original
T210	1255 / orphan	1256 / ostrich	1257 / other	1258 / outdoor	1259 / outer	1260 / output
T211	1261 / outside	1262 / oval	1263 / oven	1264 / over	1265 / own	1266 / owner
T212	1267 / oxygen	1268 / oyster	1269 / ozone	1270 / pact	1271 / paddle	1272 / page
T213	1273 / pair	1274 / palace	1275 / palm	1276 / panda	1277 / panel	1278 / panic
T214	1279 / panther	1280 / paper	1281 / parade	1282 / parent	1283 / park	1284 / parrot
T215	1285 / party	1286 / pass	1287 / patch	1288 / path	1289 / patient	1290 / patrol
T216	1291 / pattern	1292 / pause	1293 / pave	1294 / payment	1295 / peace	1296 / peanut

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T217	1297 / pear	1298 / peasant	1299 / pelican	1300 / pen	1301 / penalty	1302 / pencil
T218	1303 / people	1304 / pepper	1305 / perfect	1306 / permit	1307 / person	1308 / pet
T219	1309 / phone	1310 / photo	1311 / phrase	1312 / physical	1313 / piano	1314 / picnic
T220	1315 / picture	1316 / piece	1317 / pig	1318 / pigeon	1319 / pill	1320 / pilot
T221	1321 / pink	1322 / pioneer	1323 / pipe	1324 / pistol	1325 / pitch	1326 / pizza
T222	1327 / place	1328 / planet	1329 / plastic	1330 / plate	1331 / play	1332 / please
T223	1333 / pledge	1334 / pluck	1335 / plug	1336 / plunge	1337 / poem	1338 / poet
T224	1339 / point	1340 / polar	1341 / pole	1342 / police	1343 / pond	1344 / pony
T225	1345 / pool	1346 / popular	1347 / portion	1348 / position	1349 / possible	1350 / post
T226	1351 / potato	1352 / pottery	1353 / poverty	1354 / powder	1355 / power	1356 / practice
T227	1357 / praise	1358 / predict	1359 / prefer	1360 / prepare	1361 / present	1362 / pretty
T228	1363 / prevent	1364 / price	1365 / pride	1366 / primary	1367 / print	1368 / priority
T229	1369 / prison	1370 / private	1371 / prize	1372 / problem	1373 / process	1374 / produce
T230	1375 / profit	1376 / program	1377 / project	1378 / promote	1379 / proof	1380 / property
T231	1381 / prosper	1382 / protect	1383 / proud	1384 / provide	1385 / public	1386 / pudding
T232	1387 / pull	1388 / pulp	1389 / pulse	1390 / pumpkin	1391 / punch	1392 / pupil
T233	1393 / puppy	1394 / purchase	1395 / purity	1396 / purpose	1397 / purse	1398 / push
T234	1399 / put	1400 / puzzle	1401 / pyramid	1402 / quality	1403 / quantum	1404 / quarter
T235	1405 / question	1406 / quick	1407 / quit	1408 / quiz	1409 / quote	1410 / rabbit
T236	1411 / raccoon	1412 / race	1413 / rack	1414 / radar	1415 / radio	1416 / rail
T237	1417 / rain	1418 / raise	1419 / rally	1420 / ramp	1421 / ranch	1422 / random
T238	1423 / range	1424 / rapid	1425 / rare	1426 / rate	1427 / rather	1428 / raven
T239	1429 / raw	1430 / razor	1431 / ready	1432 / real	1433 / reason	1434 / rebel
T240	1435 / rebuild	1436 / recall	1437 / receive	1438 / recipe	1439 / record	1440 / recycle
T241	1441 / reduce	1442 / reflect	1443 / reform	1444 / refuse	1445 / region	1446 / regret
T242	1447 / regular	1448 / reject	1449 / relax	1450 / release	1451 / relief	1452 / rely
T243	1453 / remain	1454 / remember	1455 / remind	1456 / remove	1457 / render	1458 / renew
T244	1459 / rent	1460 / reopen	1461 / repair	1462 / repeat	1463 / replace	1464 / report
T245	1465 / require	1466 / rescue	1467 / resemble	1468 / resist	1469 / resource	1470 / response
T246	1471 / result	1472 / retire	1473 / retreat	1474 / return	1475 / reunion	1476 / reveal
T247	1477 / review	1478 / reward	1479 / rhythm	1480 / rib	1481 / ribbon	1482 / rice
T248	1483 / rich	1484 / ride	1485 / ridge	1486 / rifle	1487 / right	1488 / rigid
T249	1489 / ring	1490 / riot	1491 / ripple	1492 / risk	1493 / ritual	1494 / rival
T250	1495 / river	1496 / road	1497 / roast	1498 / robot	1499 / robust	1500 / rocket
T251	1501 / romance	1502 / roof	1503 / rookie	1504 / room	1505 / rose	1506 / rotate
T252	1507 / rough	1508 / round	1509 / route	1510 / royal	1511 / rubber	1512 / rude
T253	1513 / rug	1514 / rule	1515 / run	1516 / runway	1517 / rural	1518 / sad
T254	1519 / saddle	1520 / sadness	1521 / safe	1522 / sail	1523 / salad	1524 / salmon
T255	1525 / salon	1526 / salt	1527 / salute	1528 / same	1529 / sample	1530 / sand
T256	1531 / satisfy	1532 / satoshi	1533 / sauce	1534 / sausage	1535 / save	1536 / say
T257	1537 / scale	1538 / scan	1539 / scare	1540 / scatter	1541 / scene	1542 / scheme
T258	1543 / school	1544 / science	1545 / scissors	1546 / scorpion	1547 / scout	1548 / scrap
T259	1549 / screen	1550 / script	1551 / scrub	1552 / sea	1553 / search	1554 / season
T260	1555 / seat	1556 / second	1557 / secret	1558 / section	1559 / security	1560 / seed
T261	1561 / seek	1562 / segment	1563 / select	1564 / sell	1565 / seminar	1566 / senior
T262	1567 / sense	1568 / sentence	1569 / series	1570 / service	1571 / session	1572 / settle
T263	1573 / setup	1574 / seven	1575 / shadow	1576 / shaft	1577 / shallow	1578 / share
T264	1579 / shed	1580 / shell	1581 / sheriff	1582 / shield	1583 / shift	1584 / shine
T265	1585 / ship	1586 / shiver	1587 / shock	1588 / shoe	1589 / shoot	1590 / shop
T266	1591 / short	1592 / shoulder	1593 / shove	1594 / shrimp	1595 / shrug	1596 / shuffle
T267	1597 / shy	1598 / sibling	1599 / sick	1600 / side	1601 / siege	1602 / sight
T268	1603 / sign	1604 / silent	1605 / silk	1606 / silly	1607 / silver	1608 / similar
T269	1609 / simple	1610 / since	1611 / sing	1612 / siren	1613 / sister	1614 / situate
T270	1615 / six	1616 / size	1617 / skate	1618 / sketch	1619 / ski	1620 / skill
T271	1621 / skin	1622 / skirt	1623 / skull	1624 / slab	1625 / slam	1626 / sleep
T272	1627 / slender	1628 / slice	1629 / slide	1630 / slight	1631 / slim	1632 / slogan
T273	1633 / slot	1634 / slow	1635 / slush	1636 / small	1637 / smart	1638 / smile
T274	1639 / smoke	1640 / smooth	1641 / snack	1642 / snake	1643 / snap	1644 / sniff
T275	1645 / snow	1646 / soap	1647 / soccer	1648 / social	1649 / sock	1650 / soda
T276	1651 / soft	1652 / solar	1653 / soldier	1654 / solid	1655 / solution	1656 / solve
T277	1657 / someone	1658 / song	1659 / soon	1660 / sorry	1661 / sort	1662 / soul
T278	1663 / sound	1664 / soup	1665 / source	1666 / south	1667 / space	1668 / spare
T279	1669 / spatial	1670 / spawn	1671 / speak	1672 / special	1673 / speed	1674 / spell
T280	1675 / spend	1676 / sphere	1677 / spice	1678 / spider	1679 / spike	1680 / spin
T281	1681 / spirit	1682 / split	1683 / spoil	1684 / sponsor	1685 / spoon	1686 / sport
T282	1687 / spot	1688 / spray	1689 / spread	1690 / spring	1691 / spy	1692 / square
T283	1693 / squeeze	1694 / squirrel	1695 / stable	1696 / stadium	1697 / staff	1698 / stage
T284	1699 / stairs	1700 / stamp	1701 / stand	1702 / start	1703 / state	1704 / stay
T285	1705 / steak	1706 / steel	1707 / stem	1708 / step	1709 / stereo	1710 / stick
T286	1711 / still	1712 / sting	1713 / stock	1714 / stomach	1715 / stone	1716 / stool
T287	1717 / story	1718 / stove	1719 / strategy	1720 / street	1721 / strike	1722 / strong
T288	1723 / struggle	1724 / student	1725 / stuff	1726 / stumble	1727 / style	1728 / subject

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T289	1729 / submit	1730 / subway	1731 / success	1732 / such	1733 / sudden	1734 / suffer
T290	1735 / sugar	1736 / suggest	1737 / suit	1738 / summer	1739 / sun	1740 / sunny
T291	1741 / sunset	1742 / super	1743 / supply	1744 / supreme	1745 / sure	1746 / surface
T292	1747 / surge	1748 / surprise	1749 / surround	1750 / survey	1751 / suspect	1752 / sustain
T293	1753 / swallow	1754 / swamp	1755 / swap	1756 / swarm	1757 / swear	1758 / sweet
T294	1759 / swift	1760 / swim	1761 / swing	1762 / switch	1763 / sword	1764 / symbol
T295	1765 / symptom	1766 / syrup	1767 / system	1768 / table	1769 / tackle	1770 / tag
T296	1771 / tail	1772 / talent	1773 / talk	1774 / tank	1775 / tape	1776 / target
T297	1777 / task	1778 / taste	1779 / tattoo	1780 / taxi	1781 / teach	1782 / team
T298	1783 / tell	1784 / ten	1785 / tenant	1786 / tennis	1787 / tent	1788 / term
T299	1789 / test	1790 / text	1791 / thank	1792 / that	1793 / theme	1794 / then
T300	1795 / theory	1796 / there	1797 / they	1798 / thing	1799 / this	1800 / thought
T301	1801 / three	1802 / thrive	1803 / throw	1804 / thumb	1805 / thunder	1806 / ticket
T302	1807 / tide	1808 / tiger	1809 / tilt	1810 / timber	1811 / time	1812 / tiny
T303	1813 / tip	1814 / tired	1815 / tissue	1816 / title	1817 / toast	1818 / tobacco
T304	1819 / today	1820 / toddler	1821 / toe	1822 / together	1823 / toilet	1824 / token
T305	1825 / tomato	1826 / tomorrow	1827 / tone	1828 / tongue	1829 / tonight	1830 / tool
T306	1831 / tooth	1832 / top	1833 / topic	1834 / topple	1835 / torch	1836 / tornado
T307	1837 / tortoise	1838 / toss	1839 / total	1840 / tourist	1841 / toward	1842 / tower
T308	1843 / town	1844 / toy	1845 / track	1846 / trade	1847 / traffic	1848 / tragic
T309	1849 / train	1850 / transfer	1851 / trap	1852 / trash	1853 / travel	1854 / tray
T310	1855 / treat	1856 / tree	1857 / trend	1858 / trial	1859 / tribe	1860 / trick
T311	1861 / trigger	1862 / trim	1863 / trip	1864 / trophy	1865 / trouble	1866 / truck
T312	1867 / true	1868 / truly	1869 / trumpet	1870 / trust	1871 / truth	1872 / try
T313	1873 / tube	1874 / tuition	1875 / tumble	1876 / tuna	1877 / tunnel	1878 / turkey
T314	1879 / turn	1880 / turtle	1881 / twelve	1882 / twenty	1883 / twice	1884 / twin
T315	1885 / twist	1886 / two	1887 / type	1888 / typical	1889 / ugly	1890 / umbrella
T316	1891 / unable	1892 / unaware	1893 / uncle	1894 / uncover	1895 / under	1896 / undo
T317	1897 / unfair	1898 / unfold	1899 / unhappy	1900 / uniform	1901 / unique	1902 / unit
T318	1903 / universe	1904 / unknown	1905 / unlock	1906 / until	1907 / unusual	1908 / unveil
T319	1909 / update	1910 / upgrade	1911 / uphold	1912 / upon	1913 / upper	1914 / upset
T320	1915 / urban	1916 / urge	1917 / usage	1918 / use	1919 / used	1920 / useful
T321	1921 / useless	1922 / usual	1923 / utility	1924 / vacant	1925 / vacuum	1926 / vague
T322	1927 / valid	1928 / valley	1929 / valve	1930 / van	1931 / vanish	1932 / vapor
T323	1933 / various	1934 / vast	1935 / vault	1936 / vehicle	1937 / velvet	1938 / vendor
T324	1939 / venture	1940 / venue	1941 / verb	1942 / verify	1943 / version	1944 / very
T325	1945 / vessel	1946 / veteran	1947 / viable	1948 / vibrant	1949 / vicious	1950 / victory
T326	1951 / video	1952 / view	1953 / village	1954 / vintage	1955 / violin	1956 / virtual
T327	1957 / virus	1958 / visa	1959 / visit	1960 / visual	1961 / vital	1962 / vivid
T328	1963 / vocal	1964 / voice	1965 / void	1966 / volcano	1967 / volume	1968 / vote
T329	1969 / voyage	1970 / wage	1971 / wagon	1972 / wait	1973 / walk	1974 / wall
T330	1975 / walnut	1976 / want	1977 / warfare	1978 / warm	1979 / warrior	1980 / wash
T331	1981 / wasp	1982 / waste	1983 / water	1984 / wave	1985 / way	1986 / wealth
T332	1987 / weapon	1988 / wear	1989 / weasel	1990 / weather	1991 / web	1992 / wedding
T333	1993 / weekend	1994 / weird	1995 / welcome	1996 / west	1997 / wet	1998 / whale
T334	1999 / what	2000 / wheat	2001 / wheel	2002 / when	2003 / where	2004 / whip
T335	2005 / whisper	2006 / wide	2007 / width	2008 / wife	2009 / wild	2010 / will
T336	2011 / win	2012 / window	2013 / wine	2014 / wing	2015 / wink	2016 / winner
T337	2017 / winter	2018 / wire	2019 / wisdom	2020 / wise	2021 / wish	2022 / witness
T338	2023 / wolf	2024 / woman	2025 / wonder	2026 / wood	2027 / wool	2028 / word
T339	2029 / work	2030 / world	2031 / worry	2032 / worth	2033 / wrap	2034 / wreck
T340	2035 / wrestle	2036 / wrist	2037 / write	2038 / wrong	2039 / yard	2040 / year
T341	2041 / yellow	2042 / you	2043 / young	2044 / youth	2045 / zebra	2046 / zero
T342	2047 / zone	2048 / zoo	Roll again! (need 1 or 2)	Roll again! (need 1 or 2)	Roll again! (need 1 or 2)	Roll again! (need 1 or 2)