Record of Important Things

If found, please return to:

Simply, people can no longer remember passwords good enough to reliably defend against dictionary attacks, and are much more secure if they choose a password too complicated to remember and then write it down. We're all good at securing small pieces of paper. I recommend that people write their passwords down on a small piece of paper, and keep it with their other valuable small pieces of paper: in their wallet.

Bruce Schneier

Contents

Two women sit in a dark room in front of a computer.

MARGARET This information needs to stay secret.

HARRIET Calm down, it's encrypted with a password nobody can guess: r 4 b @ b 1 t \$

MARGARET A simple word with substitutions and insertions? You've got to be kidding me, Harriet, a twelve-year-old computer could break that in milliseconds.

HARRIET Then you make the password.

MARGARET (*grabs four dice*) I'll make a Diceware passphrase.

MARGARET *rolls the dice*

MARGARET 1 6 6 6; that's *cognitive*.

She rolls the dice again

MARGARET 5 1 5 6; that's *poetic*.

HARRIET What's a passphrase?

MARGARET A password made from words stuck together. And with enough words chosen randomly, reasonably secure.

MARGARET *rolls the dice three more times*

HARRIET How obscure; I'll never remember these numbers.

MARGARET 5 3 5 6 3 2 2 3 5 6 2 6; your passphrase is *cognitive poetic ribbon garlic smelliness*.

HARRIET I won't call that poetic, but I can probably remember it. Thanks, Marge.

What is a Diceware passphrase?

A passphrase is a list of words that you type into your computer to let it know for sure that *the person typing is you.* Passphrases differ from passwords only in length.

Diceware is a method for picking passphrases which uses dice to select words at random from a special list. Each word in the list is preceded by a four digit number. All the digits are between one and six, allowing you to use the outcomes of four dice rolls to select a word from the list.

Directions

1. Decide how many words you want in your passphrase. A five-word passphrase provides a level of security *much* higher than the passwords most people use. For NSA-proof security, use seven words.

2. Roll all four dice at once and write the results down, reading from left to right, on a scrap of paper. Make as many of these four-digit groups as you want words in your passphrase.

3. Flip to the word list and look up the corresponding word next to each four-digit number.

4. The words you have found are your new passphrase!

5. Come up with a way to remember your phrase. It might be a story, mental picture, or sentence that will remind you of the phrase you generated.

Your passphrase is one of the 3,656,158,440,062,976 (6^{20}) alternatives that could have been chosen by this method.

1111 aardvark	1324 aquamarine	1541 buddhist	2154 cuticle
1112 abandoned	1325 arachnid	1542 buffalo	2155 cybernetic
1113 abbreviate	1326 arbitrate	1543 bullfrog	2156 cyclist
1114 abdomen	1331 ardently	1544 bunny	2161 cylinder
1115 abhorrence	1332 arena	1545 busboy	2162 cymbal
1116 abiding	1333 argument	1546 buzzard	2163 cynicism
1121 abnormal	1334 aristocrat	1551 cabin	2164 cypress
1122 abrasion	1335 armchair	1552 cactus	2165 cytoplasm
1123 absorbing	1336 aromatic	1553 cadillac	2166 dachshund
1124 abundant	1341 arrowhead	1554 cafeteria	2211 daffodil
1125 abyss	1342 arsonist	1555 cage	2212 dagger
1126 academy	1343 artichoke	1556 cahoots	2213 dairy
1131 accountant	1344 asbestos	1561 cajoling	2214 dalmatian
1132 acetone	1345 ascend	1562 cakewalk	2215 dandelion
1133 achiness	1346 aseptic	1563 calculator	2216 dartboard
1134 acid	1351 ashamed	1564 camera	2221 dastardly
1135 acoustics	1352 asinine	1565 canister	2222 datebook
1136 acquire	1353 asleep	1566 capsule	2223 daughter
1141 acrobat	1354 asocial	1611 carrot	2224 dawn
1142 actress	1355 asparagus	1612 cashew	2225 daytime
1143 acuteness	1356 astronaut	1613 cathedral	2226 dazzler
1144 aerosol	1361 asymmetric	1614 caucasian	2231 dealer
1145 aesthetic	1362 atlas	1615 caviar	2232 debris
1146 affidavit	1363 atmosphere	1616 ceasefire	2233 decal
1151 afloat	1364 atom	1621 cedar	2234 dedicate
1152 afraid	1365 atrocious	1622 celery	2235 deepness
1153 aftershave	1366 attic	1623 cement	2236 defrost
1154 again	1411 atypical	1624 census	2241 degree
1155 agency	1412 auctioneer	1625 ceramics	2242 dehydrator
1156 aggressor	1413 auditorium	1626 cesspool	2243 deliverer
1161 aghast	1414 augmented	1631 chalkboard	2244 democrat
1162 agitate	1415 auspicious	1632 cheesecake	2245 dentist
1163 agnostic	1416 automobile	1633 chimney	2246 deodorant
1164 agonizing	1421 auxiliary	1634 chlorine	2251 depot
1165 agreeing	1422 avalanche	1635 chopsticks	2252 deranged
1166 aidless	1423 avenue	1636 chrome	2253 desktop
1211 aimlessly	1424 aviator	1641 chute	2254 detergent
1212 ajar	1425 avocado	1642 cilantro	2255 device
1213 alarmclock	1426 awareness	1643 cinnamon	2256 dexterity
1214 albatross	1431 awhile	1644 circle	2261 diamond
1215 alfa	1432 awkward	1645 cityscape	2262 dibs
1216 alfalfa	1433 awning	1646 civilian	2263 dictionary
1221 algae	1434 awoke	1651 clay	2264 diffuser
1222 aliens	1435 axially	1652 clergyman	2265 digit
1223 alkaline	1436 azalea	1653 clipboard	2266 dilated
1224 almanac	1441 babbling	1654 clock	2311 dimple
1225 alongside	1442 backpack	1655 clubhouse	2312 dinnerware
1226 alphabet	1443 badass	1656 coathanger	2313 dioxide
1231 already	1444 bagpipe	1661 cobweb	2314 diploma
1232 also	1445 bakery	1662 coconut	2315 directory
1233 altitude	1446 balancing	1663 codeword	2316 dishcloth
1234 aluminum	1451 bamboo	1664 coexistent	2321 ditto
1235 always	1452 banana	1665 coffeecake	2322 dividers
1236 amazingly	1453 barracuda	1666 cognitive	2323 dizziness
1241 ambulance	1454 basket	2111 cohabitate	2324 doctor
1242 amendment	1455 bathrobe	2112 collarbone	2325 dodge
1243 amiable	1456 bazooka	2113 computer	2326 doll
1244 ammunition	1461 blade	2114 confetti	2331 dominoes
1245 amnesty	1462 blender	2115 copier	2332 donut
1246 amoeba	1463 blimp	2116 cornea	2333 doorstep
1251 amplifier	1464 blouse	2121 cosmetics	2334 dorsal
1252 amuser	1465 blurred	2122 cotton	2335 double
1253 anagram	1466 boatyard	2123 couch	2336 downstairs
1254 anchor	1511 bobcat	2124 coverless	2341 dozed
1255 android	1512 body	2125 coyote	2342 drainpipe
1256 anesthesia	1513 bogusness	2126 coziness	2343 dresser
1261 angelfish	1514 bohemian	2131 crawfish	2344 driftwood
1262 animal	1515 boiler	2132 crewmember	2345 droppings
1263 anklet	1516 bonnet	2133 crib	2346 drum
1264 announcer	1521 boots	2134 croissant	2351 dryer
1265 anonymous	1522 borough	2135 crumble	2352 dubiously
1266 answer	1523 bossiness	2136 crystal	2353 duckling
1311 antelope	1524 bottle	2141 cubical	2354 duffel
1312 anxiety	1525 bouquet	2142 cucumber	2355 dugout
1313 anyplace	1526 boxlike	2143 cuddly	2356 dumpster
1314 aorta	1531 breath	2144 cufflink	2361 duplex
1315 apartment	1532 briefcase	2145 cuisine	2362 durable
1316 apnea	1533 broom	2146 culprit	2363 dustpan
1321 apostrophe	1534 brushes	2151 cup	2364 dutiful
1322 apple	1535 bubblegum	2152 curry	2365 duvet
1323 apricot	1536 buckle	2153 cushion	2366 dwarfism

2411 dwelling	2624 evacuation	3241 gesture	3454 hygienist
2412 dwindling	2625 getaway	3242 getaway	3455 hypnotist
2413 dynamite	2626 evidence	3243 geyser	3456 ibuprofen
2414 dyslexia	2631 evolution	3244 ghoulishly	3461 icepack
2415 eagerness	2632 exam	3245 gibberish	3462 icing
2416 earlobe	2633 excerpt	3246 giddiness	3463 iconic
2421 easel	2634 exerciser	3251 giftshop	3464 identical
2422 eavesdrop	2635 exfoliate	3252 gigabyte	3465 idiocy
2423 ebook	2636 exhale	3253 gimmick	3466 idly
2424 eccentric	2641 exist	3254 giraffe	3511 igloo
2425 echoless	2642 exorcist	3255 giveaway	3512 ignition
2426 eclipse	2643 explode	3256 gizmo	3513 iguana
2431 ecosystem	2644 exquisite	3261 glasses	3514 illuminate
2432 ecstasy	2645 exterior	3262 gleeful	3515 imaging
2433 edged	2646 exuberant	3263 glisten	3516 imbecile
2434 editor	2651 fabric	3264 glove	3521 imitator
2435 educator	2652 factory	3265 glucose	3522 immigrant
2436 eelworm	2653 faded	3266 glycerin	3523 imprint
2441 eerie	2654 failsafe	3311 gnarly	3524 iodine
2442 effects	2655 falcon	3312 gnomish	3525 ionosphere
2443 eggnog	2656 family	3313 goatskin	3526 ipad
2444 egomaniac	2661 fanfare	3314 goggles	3531 iphone
2445 ejection	2662 fasten	3315 goldfish	3532 iridescent
2446 elastic	2663 faucet	3316 gong	3533 irksome
2451 elbow	2664 favorite	3321 gooey	3534 iron
2452 elderly	2665 feasibly	3322 gorgeous	3535 irrigation
2453 elephant	2666 february	3323 gosling	3536 island
2454 elfishly	3111 federal	3324 gothic	3541 isotope
2455 eliminator	3112 feedback	3325 gourmet	3542 issueless
2456 elk	3113 feigned	3326 governor	3543 italicize
2461 elliptical	3114 feline	3331 grape	3544 itemizer
2462 elongated	3115 femur	3332 greyhound	3545 itinerary
2463 elsewhere	3116 fence	3333 grill	3546 itunes
2464 elusive	3121 ferret	3334 groundhog	3551 ivory
2465 elves	3122 festival	3335 grumbling	3552 jabbering
2511 emancipate	3123 fettucine	3336 guacamole	3553 jackrabbit
2512 embroidery	3124 feudalist	3341 guerrilla	3554 jaguar
2513 emcee	3125 feverish	3342 guitar	3555 jailhouse
2514 emerald	3126 fiberglass	3343 gullible	3556 jalapeno
2515 emission	3131 fictitious	3344 gumdrop	3561 jamboree
2516 emoticon	3132 fiddle	3345 gurgling	3562 janitor
2521 emperor	3133 figurine	3346 gusto	3563 jarring
2522 emulate	3134 fillet	3351 gutless	3564 jasmine
2523 enactment	3135 finalist	3352 gymnast	3565 jaundice
2524 enchilada	3141 fiscally	3353 gynecology	3566 jawbreaker
2525 endorphin	3142 fixture	3354 gyration	3611 jaywalker
2526 energy	3143 flashlight	3355 habitat	3612 jazz
2531 enforcer	3144 fleshiness	3356 hacking	3613 jealous
2532 engine	3145 flight	3361 haggard	3614 jeep
2533 enhance	3146 florist	3362 haiku	3615 jelly
2534 enigmatic	3151 flypaper	3363 halogen	3616 jeopardize
2535 enjoyably	3152 foaminess	3364 hamburger	3621 jersey
2536 enlarged	3153 focus	3365 handgun	3622 jetski
2541 enormous	3154 foggy	3366 happiness	3623 jezebel
2542 enquirer	3155 folksong	3411 hardhat	3624 jiffy
2543 enrollment	3156 fondue	3412 hastily	3625 jigsaw
2544 ensemble	3161 footrest	3413 hatchling	3626 jingling
2545 entryway	3162 fossil	3414 haughty	3631 jobholder
2546 enunciate	3163 fountain	3415 hazelnut	3632 jockstrap
2551 envoy	3164 fox	3416 headband	3633 jogging
2552 enzyme	3165 fragment	3421 hedgehog	3634 john
2553 epidemic	3166 freeway	3422 hefty	3635 joinable
2554 equipment	3211 fridge	3423 heinously	3636 jokingly
2555 erasable	3212 frosting	3424 helmet	3641 journal
2556 ergonomic	3213 fruit	3425 hemoglobin	3642 jovial
2561 erratic	3214 fryingpan	3426 henceforth	3643 joystick
2562 eruption	3215 gadget	3431 herbs	3644 jubilant
2563 escalator	3216 gainfully	3432 hesitation	3645 judiciary
2564 eskimo	3221 gallstone	3433 hexagon	3646 juggle
2565 esophagus	3222 gamekeeper	3434 hubcap	3651 juice
2566 espresso	3223 gangway	3435 huddling	3652 jujitsu
2611 essay	3224 garlic	3436 huff	3653 jukebox
2612 estrogen	3225 gaslight	3441 hugeness	3654 jumpiness
2613 etching	3226 gathering	3442 hullabaloo	3655 junkyard
2614 eternal	3231 gauntlet	3443 human	3656 juror
2615 ethics	3232 gearbox	3444 hunter	3661 justifying
2616 etiquette	3233 gecko	3445 hurricane	3662 juvenile
2621 eucalyptus	3234 gem	3446 hushing	3663 kabob
2622 euphemism	3235 generator	3451 hyacinth	3664 kamikaze
2623 euthanize	3236 geographer	3452 hybrid	3665 kangaroo
		3453 hydrant	3666 karate

4111 kayak	4324 mammal	4541 obliterate	5154 pneumonia
4112 keepsake	4325 mango	4542 obnoxious	5155 podiatrist
4113 kennel	4326 mapmaker	4543 observer	5156 poetic
4114 kerosene	4331 marbles	4544 obtain	5161 pogo
4115 ketchup	4332 massager	4545 obvious	5162 poison
4116 khaki	4333 matchstick	4546 occupation	5163 poking
4121 kickstand	4334 maverick	4551 oceanic	5164 policeman
4122 kilogram	4335 maximum	4552 octopus	5165 poncho
4123 kimono	4336 mayonnaise	4553 ocular	5166 popcorn
4124 kingdom	4341 moaning	4554 office	5211 porcupine
4125 kiosk	4342 mobilize	4555 oftentimes	5212 postcard
4126 kissing	4343 moccasin	4556 oiliness	5213 poultry
4131 kite	4344 modify	4561 ointment	5214 powerboat
4132 kleenex	4345 moisture	4562 older	5215 prairie
4133 knapsack	4346 molecule	4563 olympics	5216 pretzel
4134 kneecap	4351 momentum	4564 omissible	5221 princess
4135 knickers	4352 monastery	4565 omnivorous	5222 propeller
4136 koala	4353 moonshine	4566 oncoming	5223 prune
4141 krypton	4354 mortuary	4611 onion	5224 pry
4142 laboratory	4355 mosquito	4612 onlooker	5225 pseudo
4143 ladder	4356 motorcycle	4613 onstage	5226 psychopath
4144 lakefront	4361 mousetrap	4614 onward	5231 publisher
4145 lantern	4362 movie	4615 onyx	5232 pucker
4146 laptop	4363 mower	4616 oomph	5233 pueblo
4151 laryngitis	4364 mozzarella	4621 opaquely	5234 pulley
4152 lasagna	4365 muckiness	4622 opera	5235 pumpkin
4153 latch	4366 mudflow	4623 opium	5236 punchbowl
4154 laundry	4411 mugshot	4624 opossum	5241 puppy
4155 lavender	4412 mule	4625 opponent	5242 purse
4156 laxative	4413 mummy	4626 optical	5243 pushup
4161 lazybones	4414 mundane	4631 opulently	5244 putt
4162 lecturer	4415 muppet	4632 oscillator	5245 puzzle
4163 leftover	4416 mural	4633 osmosis	5246 pyramid
4164 leggings	4421 mustard	4634 ostrich	5251 python
4165 leisure	4422 mutation	4635 otherwise	5252 quarters
4166 lemon	4423 myriad	4636 ought	5253 quesadilla
4211 length	4424 myspace	4641 outhouse	5254 quilt
4212 leopard	4425 myth	4642 ovation	5255 quote
4213 leprechaun	4426 nail	4643 oven	5256 racoon
4214 lettuce	4431 namesake	4644 owlish	5261 radish
4215 leukemia	4432 nanosecond	4645 oxford	5262 ragweed
4216 levers	4433 napkin	4646 oxidize	5263 railroad
4221 lewdness	4434 narrator	4651 oxygen	5264 rampantly
4222 liability	4435 nastiness	4652 oyster	5265 rancidity
4223 library	4436 natives	4653 ozone	5266 rarity
4224 licorice	4441 nautically	4654 pacemaker	5311 raspberry
4225 lifeboat	4442 navigate	4655 padlock	5312 ravishing
4226 lightbulb	4443 nearest	4656 pageant	5313 rearrange
4231 likewise	4444 nebula	4661 pajamas	5314 rebuilt
4232 lilac	4445 nectar	4662 palm	5315 receipt
4233 limousine	4446 nefarious	4663 pamphlet	5316 reentry
4234 lint	4451 negotiator	4664 pantyhose	5321 refinery
4235 lioness	4452 neither	4665 paprika	5322 register
4236 lipstick	4453 nemesis	4666 parakeet	5323 rehydrate
4241 liquid	4454 neoliberal	5111 passport	5324 reimburse
4242 listless	4455 nephew	5112 patio	5325 rejoicing
4243 litter	4456 nervously	5113 pauper	5326 rekindle
4244 liverwurst	4461 nest	5114 pavement	5331 relic
4245 lizard	4462 netting	5115 payphone	5332 remote
4246 llama	4463 neuron	5116 pebble	5333 renovator
4251 luau	4464 nevermore	5121 peculiarly	5334 reopen
4252 lubricant	4465 nextdoor	5122 pedometer	5335 reporter
4253 lucidity	4466 nicotine	5123 pegboard	5336 request
4254 ludicrous	4511 niece	5124 pelican	5341 rerun
4255 luggage	4512 nimbleness	5125 penguin	5342 reservoir
4256 lukewarm	4513 nintendo	5126 peony	5343 retriever
4261 lullaby	4514 nirvana	5131 pepperoni	5344 reunion
4262 lumberjack	4515 nuclear	5132 peroxide	5345 revolver
4263 lunchbox	4516 nugget	5133 pesticide	5346 rewrite
4264 luridness	4522 nullify	5134 petroleum	5351 rhapsody
4265 luscious	4523 numbing	5135 pewter	5352 rhetoric
4266 luxurious	4524 nuptials	5136 pharmacy	5353 rhino
4311 lyrics	4525 nursery	5141 pheasant	5354 rhubarb
4312 macaroni	4526 nutcracker	5142 phonebook	5355 rhyme
4313 maestro	4531 nylon	5143 phrasing	5356 ribbon
4314 magazine	4532 oasis	5144 physician	5361 riches
4315 mahogany	4533 oat	5145 plank	5362 ridden
4316 maimed	4534 obediently	5146 pledge	5363 rigidity
4321 majority	4535 obituary	5151 plotted	5364 rimmed
4322 makeover	4536 object	5152 plug	5365 riptide
4323 malformed		5153 plywood	5366 riskily

5411 ritzy	5624 slumbering	6241 trousers	6454 vertebrae
5412 riverboat	5625 smartphone	6242 trucks	6455 vestibule
5413 roamer	5626 smelliness	6243 tryout	6456 veteran
5414 robe	5631 smitten	6244 tubeless	6461 vexingly
5415 rocket	5632 smokestack	6245 tuesday	6462 vicinity
5416 romancer	5633 smudge	6246 tugboat	6463 videogame
5421 ropelike	5634 snapshot	6251 tulip	6464 viewfinder
5422 rotisserie	5635 sneezing	6252 tumbleweed	6465 vigilante
5423 roundtable	5636 sniff	6253 tupperware	6466 village
5424 royal	5641 snowsuit	6254 turtle	6511 vinegar
5425 rubber	5642 snugness	6255 tusk	6512 violin
5426 rudderless	5643 speakers	6256 tutorial	6513 viperfish
5431 rugby	5644 sphinx	6261 tuxedo	6514 virus
5432 ruined	5645 spider	6262 tweezers	6515 visor
5433 rulebook	5646 splashing	6263 twins	6516 vitamins
5434 running	5651 sponge	6264 tyrannical	6521 vivacious
5435 rupture	5652 sprout	6265 ultrasound	6522 vixen
5436 rustproof	5653 spur	6266 umbrella	6523 vocalist
5441 sabotage	5654 spyglass	6311 umpire	6524 vogue
5442 sacrifice	5655 squirrel	6312 unarmored	6525 voicemail
5443 saddlebag	5656 statue	6313 unbuttoned	6526 volleyball
5444 saffron	5661 steamboat	6314 uncle	6531 voucher
5445 sainthood	5662 stingray	6315 underwear	6532 voyage
5446 saltshaker	5663 stopwatch	6316 unevenness	6533 vulnerable
5451 samurai	5664 strawberry	6321 unflavored	6534 waffle
5452 sandworm	5665 student	6322 ungloved	6535 wagon
5453 sapphire	5666 stylus	6323 unhinge	6536 wakeup
5454 sardine	6111 suave	6324 unicycle	6541 walrus
5455 sassy	6112 subway	6325 unjustly	6542 wanderer
5456 satchel	6113 suction	6326 unknown	6543 wasp
5461 sauna	6114 suds	6331 unlocking	6544 water
5462 savage	6115 suffocate	6332 unmarked	6545 waving
5463 saxophone	6116 sugar	6333 unnoticed	6546 wheat
5464 scarf	6121 suitcase	6334 unopened	6551 whisper
5465 scenario	6122 sulphur	6335 unpaved	6552 wholesaler
5466 schoolbook	6123 superstore	6336 unquenched	6553 wick
5511 scientist	6124 surfer	6341 unroll	6554 widow
5512 scooter	6125 sushi	6342 unscrewing	6555 wielder
5513 scrapbook	6126 swan	6343 untied	6556 wifeless
5514 sculpture	6131 sweatshirt	6344 unusual	6561 wikipedia
5515 scythe	6132 swimwear	6345 unveiled	6562 wildcat
5516 sedative	6133 sword	6346 unwrinkled	6563 windmill
5521 segregator	6134 sycamore	6351 unyielding	6564 wipeout
5522 seismology	6135 syllable	6352 unzip	6565 wired
5523 selected	6136 symphony	6353 upbeat	6566 wishbone
5524 semicolon	6141 synagogue	6354 upcountry	6611 wizardry
5525 senator	6142 syringes	6355 update	6612 wobbliness
5526 septum	6143 systemize	6356 upfront	6613 wolverine
5531 sequence	6144 tablespoon	6361 upgrade	6614 womb
5532 serpent	6145 taco	6362 upholstery	6615 woolworker
5533 sesame	6146 tadpole	6363 upkeep	6616 workbasket
5534 settler	6151 taekwondo	6364 upload	6621 wound
5535 severely	6152 tagalong	6365 uppercut	6622 wrangle
5536 shack	6153 takeout	6366 upright	6623 wreckage
5541 shelf	6154 tallness	6411 upstairs	6624 wristwatch
5542 shirt	6155 tamale	6412 uptown	6625 wrongdoing
5543 shovel	6156 tanned	6413 upwind	6626 xerox
5544 shrimp	6161 tapestry	6414 uranium	6631 xylophone
5545 shuttle	6162 tarantula	6415 urban	6632 yacht
5546 shyness	6163 tastebud	6416 urchin	6633 yahoo
5551 siamese	6164 tattoo	6421 urethane	6634 yard
5552 sibling	6165 tavern	6422 urgent	6635 yearbook
5553 siesta	6166 thaw	6423 urologist	6636 yesterday
5554 silicon	6211 theater	6424 username	6641 yiddish
5555 simmering	6212 thimble	6425 usher	6642 yield
5556 singles	6213 thorn	6426 utensil	6643 yodel
5561 sisterhood	6214 throat	6431 utility	6644 yogurt
5562 sitcom	6215 thumb	6432 utmost	6645 yoyo
5563 sixfold	6216 thwarting	6433 utopia	6646 yuppie
5564 sizable	6221 tiara	6434 utterance	6651 zealot
5565 skateboard	6222 tidbit	6435 vacuum	6652 zebra
5566 skeleton	6223 tiebreaker	6436 vagrancy	6653 zeppelin
5611 skies	6224 tiger	6441 valuables	6654 zestfully
5612 skillet	6225 timid	6442 vanquished	6655 zigzagged
5613 skull	6226 tinsel	6443 vaporizer	6656 zillion
5614 skunk	6231 tiptoeing	6444 varied	6661 zipping
5615 skylight	6232 tirade	6445 vaseline	6662 zirconium
5616 slapping	6233 tissue	6446 vegetable	6663 zodiac
5621 sled	6234 tractor	6451 vehicle	6664 zombie
5622 slingshot	6235 tree	6452 velcro	6665 zookeeper
5623 sloth	6236 tripod	6453 vendor	6666 zucchini

Website

Login or Email address

Passwords used   Date

Notes

Website

Login or Email address

Passwords used   Date

Notes

Website

Login or Email address

Passwords used   Date

Notes

Website

Login or Email address

Passwords used   Date

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Notes

Security questions

Shouldn't I never write my password down?

In today's world, major corporations are hacked every week, and distributed cracking networks can break complex passwords in record time. It's safest to use a strong, unique password for each account you hold, but this makes memorization impractical.

Once, people were told not to write passwords down, ever, but the consensus among security professionals has evolved. You're better at protecting this book than corporations are at securing their password databases.

Can I just pick my own words from the list?

No. Humans are terrible at being unpredictable, and hackers are great at exploiting predictability. The primary reason that Diceware creates secure passwords is that you have no agency in the process.

Should I leave spaces between the words?

Yes. It makes your passphrase more secure, and easier to type.

How many words should I use in my passphrase?

The most important accounts, such as email, e-commerce and financial sites, should use at least five words.

Encrypted drives storing sensitive personal and financial documents should use seven words.

Less critical accounts, like social media, can use three words provided the passwords are unique.

My passphrase was rejected because it is too long, or because it lacks capitalization and numbers.

You may shorten words to no less than three letters without affecting the security of your passphrase. You may also replace words with their associated 4 digit number. You may *not* choose different words.

Capitalization adds a very small amount of security; if required, pick a memorable word to capitalize.

What if I lose this book?

The real purpose of this book is to provide you with the tools to generate strong, memorable passwords that are

unbreakable by the world's most powerful computers. It need not be the only place that you record them.

Are password managers like 1Password safe?

Yes, as long as the master password is strong & secure. For example, if Google Chrome is configured to store your password, make sure that you have a strong Google password, and don't leave your account logged in on computers or mobile devices that are not physically secure. The same is true of Safari and iCloud, Internet Explorer and Windows Live, etc.

Who invented Diceware?

Diceware was invented by Arnold G. Reinhold, a computer scientist in Cambridge, MA. It was first published to Usenet's *sci.crypt.research* on August 1st, 1995. For lots more information, visit `https://goo.gl/xobzeV`.

This book implements a simplified version developed by the Electronic Frontier Foundation (EFF) in 2016.

What is the danger in reusing a password?

Imagine that you used the same password for an online clothing store, and your email provider. Months later, the clothing store is hacked and your password is stolen. The hackers login to your email and find correspondence from your bank. They use the bank website to reset your online banking password, and intercept the confirmation email. Next, they use the bank website to order checks in your name, initiate transfers, etc.

This story illustrates why the security of your email ranks above others in importance: for hackers, it is the gateway to all your accounts.

How can I find out if my password has been stolen?

Visit `haveibeenpwned.com`, and type in your email address. This helpful site tracks the data leaks released by hackers, and maintains a database of email addresses hacked and what kind of data was stolen.

If your email tests positive, immediately change the password for the sites listed *and* any sites that might have shared the same password.

What is two-factor authentication?

Two-factor authentication enhances your password by sending a code to your phone or another device, which you must supply in order to be authorized. This ensures that even if someone has your password, they also need to have your phone.

It's a good idea to set up two-factor authentication on any account linked to your bank account or credit cards.

The US Government no longer recommends SMS for two-factor authentication, due to the ease with which text messages can be intercepted. Mobile apps like Google Authenticator are more secure.

What is phishing?

Phishing is when a hacker sends you an email message which appears to be from an organization you have a relationship with, but is actually a trap to make you give up your password.

Phishing emails typically warn you that something is wrong with your account, a delivery, or another kind of transaction, and urge you to open a document or log in via a link. They can be very realistic and insidious.

Always check the URL in any emailed links you click, and be sure that they take you to the site you expect.

What is social engineering?

Social engineering is when a hacker contacts a company you do business with and pretends to be you. Often this means telling customer service that you have lost your password, and trying to convince the representative to change it or otherwise unlock your account.

The best protection against social engineering is to avoid easily-guessed security questions, such as your mother's maiden name. When asked for such information, generate a Diceware password instead.

How can I stay safe online?

Above all, practice good operational security (*opsec*). Be suspicious and careful online.

Minimize the number of accounts you open, and always choose the best account security available. Keep track of the accounts you open, close unused accounts, and change passwords on active accounts regularly. Prefer to shop with businesses that have strong online safeguards, and take advantage of identity protection and online shopping protection services offered by reputable financial institutions.

What to do if I've been hacked?

The resources at `crashoverridenetwork.com` and at `staysafeonline.org` are a good starting point. They provide tools to help determine whether you have been hacked and can help you to regain control over your online accounts.