

# A 256-part list for memorising 128-bit keys by constrained choice

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## Introduction

This document is intended to help memorise cryptographic keys and other strong secrets using the method introduced in the following article.

“How to remember a 128-bit key using constrained choice”, Stephen Hewitt, August 2018

<http://www.cambridgeclarion.org/pw2.html>

For information on how to use this document see the article.

This version of this list uses the system of abbreviation of taking the first three letters of each word. If the word contains less than three letters it is padded with “x”

Note that Appendix 1 (Inverse Lookup) allows you to look up an abbreviation and recover the value of the byte of the key.

## Key to the partition headings

For example in the heading “0x0e = 11/66;46 = A;O = 14”

**0x0e** Value of this byte of the key in hex, written in C/C++ style with leading 0x

**11/66;46** The dice outcome for those that wish to use dice to generate the key

**A;O** The equivalent letter bead outcome

**14** Value of this byte of the key in decimal

The {} brackets that follow contain the allowed abbreviations.

## Words and their abbreviations, a list in 256 parts

**0x00 = 11/66;11/66 = A;A = 0 { con }** con conceit conceive concept concern concert concession concierge concrete concubine condemn conditions condo condom conduct cone conference confetti configure confirm conflict congress conifer conjure conker connect conquer consent consider console conspiracy construct consumer contact contain contest context continue contraception contract control convention convey convince convoy

**0x01 = 11/66;12 = A;B = 1 { com }** coma comb combat combine come comedy comet comfort comic comma command comment commerce commission committee commode commodity common communist community commuter compact companion company compare compass compassionate compel compensate compete complain

complete complex compliance compliment comply component composer compost compound comprehensive  
computer comrade

**0x02 = 11/66;13 = A;C = 2 { pro }** probe problem procedure process procrastinate product profession professor  
profile profit progeny programme progress project prole promiscuity promise promote prompt prong proof  
propaganda propane property prophet proposal prosciutto prostrate protect protein protest protocol prove  
provide province proviso provoke prow prowess prowl proxy prozac

**0x03 = 11/66;14 = A;D = 3 { cha }** chad chaff chain chair chalet chalk challenge chamber chameleon champ  
champagne champion chance change channel chant chaos chap chapel chapter char character charcoal chard  
charge chariot charity charm chart charter chase chasm chassis chastity chat chauffeur

**0x04 = 11/66;15 = A;E = 4 { sta }** stab stable stack stadium staff stag stage stagger stainless stairs stake stale  
stalk stall stallion stamp stand standard staple star starch stare starling start starve stash state statement static  
station statistics status statute stay

**0x05 = 11/66;16 = A;F = 5 { aya myo qua }** ayatollah myopia quack quad quadriplegic quaff quagmire quail  
quaint quake qualify quality qualm quandary quango quant quantity quarantine quark quarrel quarry quart quarter  
quarterdeck quarterlight quartermaster quartz quasar quash quaternary quatrain quay

**0x06 = 11/66;23 = A;G = 6 { car esk uta }** car carafe caramel caravan carbon carburettor carcass card cardinal  
care career caress cargo caribbean carnal carnivore carol carp carpenter carpet carriage carrier carrion carrot carry  
cart cartel cartoon cartridge carve eskimo utah

**0x07 = 11/66;24 = A;H = 7 { axo eru tra }** axon erupt trace track tract tractor trade tradition traffic trail train  
trainee trait traitor tram tramp trance trans- transactions transcript transfer transform transistor transit translate  
transmit transport trap trash travel trawl tray

**0x08 = 11/66;25 = A;I = 8 { axl ers for tui }** axle ersatz forage foray forbid force ford fore forecast foreman  
forensics foreplay foreskin forest forfeit forge forget forgive forgo fork form formal format former formica formula  
fornicate fort fortune forum forward tuition

**0x09 = 11/66;26 = A;J = 9 { myl par tul utm }** mylar para parade paradise paradox paraffin paragraph  
paralysis paranoid parcel parch parchment pardon pare parent parish park parliament parlour parody parole  
parrot parse parsley parsnip part participate particle partner party tulip utmost

**0x0a = 11/66;34 = A;K = 10 { lud mec mye pre }** luddite ludo mechanism myelin precipice precipitate precise  
predator predict preen prefab preface prefect prefer prefix pregnancy preliminary premises premium prepare  
prerequisite prescription present preserve president press pressure pretend prevaricate prevent preview prey

**0x0b = 11/66;35 = A;L = 11 { bia erg gil str utt }** bias ergonomics gill gilt straddle straight strain stranger  
strap strategy straw stray streak stream street strength stress strew stride strife strike string strip strobe stroke  
stroll strop structure struggle strum strut utter

**0x0c = 11/66;36 = A;M = 12 { bha gle gra rod say uvx }** bhaji glee glen grab grace grad grade gradient graft  
grail grain grammar gramme grand grandma granite grant grape graph grasp grass gratitude grave gravel gravity  
gravy graze rod rodent rodeo say uv

**0x0d = 11/66;45 = A;N = 13 { dis epr fie gon lov tup }** disabled disaster disc discern disciple discipline  
disclaimer disclosure disco discount discover discuss disease disguise disgust dish disk dismissal display dispute  
disrobe distant distribute district eprom fiefdom field fiesta gong gonorrhoea love tuppence

**0x0e = 11/66;46 = A;O = 14 { fia fla gov myc tsu vox }** fiancee fiasco fiat flab flack flag flagship flail flair flake  
flame flamenco flamingo flank flannel flap flare flash flask flat flatter flatus flaunt flavour flaw flax flay govern  
governess mycobacterium tsunami vox

**0x0f = 11/66;56 = A;P = 15 { anx bop can mya sip tus zan }** anxiety bop can canada canal canape canary  
cancel cancer candidate candle candy cane canine cannabis cannelloni cannibal cannon canoe canopy cant canteen  
canter canvas canyon myanmar sip siphon tusk zantac zany zanzibar

**0x10 = 12;11/66 = B;A = 16 { anv enz laz pri siz tuv zen }** anvil enzyme laze priapus price prick pride priest  
prig prim primate prime primitive prince principle print prion priority priory prise prism prison privacy privilege  
privy prize size sizzle tuvalu zen zenith zeno

**0x11 = 12;12 = B;B = 17 { anu box ens pla sku tux zoo }** anus box ensure place placebo plague plaice plain  
plaintiff plait plan plane planet plank plankton plant plaque plasma plastic plate platform platinum platoon play  
playboy plaza skull skunk tuxedo zoo zoology zoom

**0x12 = 12;13 = B;C = 18 { abb ans beq bri buy enr soa }** abbey abbot abbreviate answer bequest briar bribe  
brick bride bridge bridle brie brief briefcase brig brigade bright brilliance brillig brim brine bring brink brisk bristle  
brit britain brittle buy enroll soak soap

**0x13 = 12;14 = B;D = 19 { ank enq hur lei out smi tov }** ankle enquiry hurricane hurry hurt leisure outage  
outback outboard outbreak outcome outdoors outfit outgribe outlaw outlay outlet outline outlook outpatient outpost  
output outrage outreach outside outskirts outweigh outwit smile smirk smite tove

**0x14 = 12;15 = B;E = 20 { ani bar boh enl meo nos smu }** animal bar barb barbados barbeque barber  
barcelona bard bare bargain barge bark barley barn barnacle barometer baron barrel barren barricade barrier  
barrow barter bohemia enlarge meow nose nosedive nostalgia smudge smuggler smut

**0x15 = 12;16 = B;F = 21 { ane enj sne sub tox two was }** aneurysm enjoy sneak sneer sneeze sub subclass  
subcommittee subject sublime submarine submerge submit subscribe subsection subset subsidiary subsidy  
substance substitute substrate subtitle subtotal suburb subvert subway toxin two wash washer wasp waste

**0x16 = 12;23 = B;G = 22 { ali amu bof eco eni tyc whi }** alias alibi alien align amuse boffin ecology economy  
ecosystem enigma tycoon whiff whig whim whimper whine whip whiplash whippet whirl whirr whisk whiskers  
whisky whisper whist whistle whit white whitehall whitsun whittle

**0x17 = 12;24 = B;H = 23 { alg boe cro enh lop sai tyi }** algae algebra algeria algorithm boer croak croatia  
crochet crock crockery crocodile crocus croissant crone crony crook crop croquette cross crossroads crossword  
crotch crouch crow crowd crown enhance lop sail sailor saint tying

**0x18 = 12;25 = B;I = 24 { esp keg leo los res ros wha }** esperanto espresso keg leopard loss rescind rescue  
research reserve reset resident resin resist resolution resolve resort resource respect response rest restaurant restore  
restrict result resume rose rosemary roster whack whale wham wharf

**0x19 = 12;26 = B;J = 25 { air aor ebo feb kle row tri }** air aircraft airline airport aorta ebola ebony february  
kleptomaniac row rowan rowdy trial triangle tribe tribune tribute trick trickle trifle trigger trike trilogy trim trinity  
trio trip tripe triple tripod triumph trivia

**0x1a = 12;34 = B;K = 26 { dor ecl hea rut sad wax wic }** dorm eclectic eclipse head headache header headline  
headmaster headphone headquarters heal health heap hear hearst heart hearth heat heathen heather heave heaven  
heavy rut sad saddle sadism wax wicca wick wicker wicket

**0x1b = 12;35 = B;L = 27 { dec ede fal rwa sua way wid }** decade decaf decay deceased deceit deceive  
december decency decide decimal decipher deck declare decline deco decor decoy decrease decree decrypt edelweiss  
eden falcon fall falter rwa suave way widen widget widow width

**0x1c = 12;36 = B;M = 28 { ami bra doj emu gol rye wil }** amino bra brace bracelet bracket brag braid brain  
brake bramble bran branch brand brandy brass brat brave bravo brawl braze brazil dojo emu emulate gold golem  
golf rye wild will willow wilt

**0x1d = 12;45 = B;N = 29 { alu ena faz hai imp kal kla }** aluminium enable enamel faze hail hair haiti imp  
impact impair impale imperial implant implement implore imply import impose impossible impostor impotence  
impression imprint imprison improve impulse impunity kalamata kalashnikov kale kaleidoscope klaxon

**0x1e = 12;46 = B;O = 30 { ban doe ene fax hab lot mah }** ban banana band bandage bandit bandwidth  
bandy bane bang banger bangladesh bangle banish banister banjo bank banner banns banquet banter doe enemy  
energy fax haberdashery habit habitat lot lotion lottery lotus mahogany

**0x1f = 12;56 = B;P = 31 { ben biz chi dob faw lis lox rib }** bench bend benefit bent biz chic chick chickpea  
chickweed chief child chile chill chilli chime chimney chimp chin china chink chip chirp chisel chives doberman fawn  
lisp list listen lox rib ribbon

**0x20 = 13;11/66 = C;A = 32 { bed bix dji keb lic poe rev wef }** bed bedlam bedouin bedtime bi djibouti  
kebab licence lichen lick poem poet rev reveal revelry revenge revenue reverb reverse reverend reverie reverse revert  
review revise revival revoke revolt revolver revue revulsion weft

**0x21 = 13;12 = C;B = 33 { alk biw bro diz nag pok tyr unc }** alkali biweekly broad broadcast broccoli  
brochure broker broolly bromide bronco brontolo bronze brooch brood broom broth brothel brother brow brown  
browse dizzy nag poke poker tyrannosaurus tyrant tyre tyrosine uncertainty uncle uncover

**0x22 = 13;13 = C;C = 34 { ale bam dix flu mez ome pom sah }** alert bambino bamboo bamboozle dixie flu  
flub fluctuate flue fluency fluff fluid fluke flume flunk flunky fluorescent fluoride fluoxetine flush fluster flute flutter  
flux mezzanine omega omelette omen omerta pomegranate pomp sahara

**0x23 = 13;14 = C;D = 35 { ald bau fah flo mex puc sul upl }** alder baud bauhaus baulk bauxite fahrenheit  
float flock floe flood floor floozy flop flora floss flotation flotilla flotsam flounce flounder flour flourish flout flow  
flower mexico puck pucker sulk upland uplift upload

**0x24 = 13;15 = C;E = 36 { bag bre byt dik maf pud sey upr }** bag bagel bagpipe baguette breach bread  
breadth break breakdown breaker breakfast breakthrough bream breast breaststroke breath breech breed breeze  
brethren breton brevity brewer byte dike mafia pudding puddle seychelles upright uprising uproar

**0x25 = 13;16 = C;F = 37 { cip fae kiw lif lir pug qui ups }** cipher faeces kiwi life lifeboat lifeguard lift lira pug puglia quiche quick quickie quicksand quicksilver quickstep quid quiet quill quilt quince quinine quintessence quintet quip quirk quisling quit quiz upset upside upstairs

**0x26 = 13;23 = C;G = 38 { bes ced dha fri lip nab ray vid }** besot best bestiality bestow cedar dharma friar friction friday fridge friend frier friesian frieze frigate fright frigid frill fringe frisbee frisk frisson fritter frivolity frizzy lip lipid liposuction nab ray rayon video

**0x27 = 13;24 = C;H = 39 { ezi gro klu lil max rhy tik vam }** ezine groan grocer grocery groin grok groom groove grope gross grot grotto ground group groupie grouse grout grove grovel growl kludge lilac lilo lilt lily max rhyme rhythm tikka vamoose vamp vampire

**0x28 = 13;25 = C;I = 40 { ash avo cea cou dew eyr nee vag }** ash avocado avocet avoid cease couch cougar cough council counsel count counter counterfeit country county coupe couple coupon courage course court courtesan courtesy cousin dew eyrie need needle vagabond vagina vagrant vagus

**0x29 = 13;26 = C;J = 41 { aug awa cak cra naa rio suz vik }** auger augment august await awake award aware cake crab crack crackpot cradle craft crag cram cramp cranberry crane crank crap crash crate crater crawl crayon craze crazy naan rio riot suzerain viking

**0x2a = 13;34 = C;K = 42 { avi cor deo ewe lak mav pow rip }** aviary aviation avid avionics coral cord cordon core corgi coriander cork corn cornea corner coronary corp corpse corpus correct corridor corrosion corset cortisol deodorant ewe lake maverick powder power powwow rip ripple

**0x2b = 13;35 = C;L = 43 { asb ava cag dej myt per roc vib }** asbestos available avalanche avarice avatar cage dejected myth percent perch perfect perform perfume peril period periscope perjury perk permanent permit perry personal personnel perspire persuade peru pervert rock rocket vibe vibrato vibrator

**0x2c = 13;36 = C;M = 44 { eut lao mau mop rog sha vas vil }** euthanasia laos mauve moped roger rogue shack shade shadow shaft shag shake shale sham shame shampoo shandy shank shanty shape shard share shark sharp shawl vasculitis vase vasectomy vaseline villa village villain

**0x2d = 13;45 = C;N = 45 { aro cur deh jin mig mys pru tis }** aroma cur curator curb curd curdle cure curfew curl curlew currency current curriculum curry curse cursor curtail curtsy curve dehumidifier jingle jingoism jinx might migraine migrant mystery prude prudence prune prussia tissue

**0x2e = 13;46 = C;O = 46 { ark byz cat eas eup has pim syd }** ark byzantine cat catalan catalogue catalyst catapult cataract catastrophe catch category catering caterpillar catharsis cathedral catholic cation catkin cattle catwalk ease easel east euphoria hash hashish hasp hassle pimento pimp pimple sydney

**0x2f = 13;56 = C;P = 47 { app arj bse dyn euk gul neb syl }** apparatus apparel apparition appeal appear appease appendix appetite apple apply appointment appraisal appreciate apprentice approach appropriate approval approximate arjuna bse dynamite dynamo dynasty eukaryote gulag gulf gully nebuchadnezzar nebula nebuliser syllabus

**0x30 = 14;11/66 = D;A = 48 { byp edd jos knu lio reh scr son }** bypass eddy josh joss jostle knuckles lion rehab rehash rehearsal reheat scrap scrape scratch scrawl scream scree screen screw scribble scribe scrim script scripture scroll scrounge scrub scrum scrutiny son song sonnet

**0x31 = 14;12 = D;B = 49 { byl cla duv eif hot rin sor upp }** bylaw claim clam clamber clamp clan clang clank clap claret clarion clash clasp class classic classify clause claw clay duvet eiffel hotdog hotel hotspot rind ring ringer rink sorcery sore sort upper

**0x32 = 14;13 = D;C = 50 { dup joi mar muj sky tit toe vix }** dupe duplex duplicate join joiner joist marble march mare margin marina marine mark market marmite marquee marriage marsh marshall marshmallow martyr marvel mujahedin sky tit titan titanium title titre toe vixen

**0x33 = 14;14 = D;D = 51 { ast bye duo eid liz non som thr }** asterisk asthma astrology astronaut astronomy bye duo duodenum duomo eiderdown lizard none nonprofit nonsense somalia thrash thread threat threesome thresh threshold thrill thriller throat throes throne throng throttle throughput throw thrush thrust

**0x34 = 14;15 = D;E = 52 { dud dyk egypt nom noo pol tif vod }** dud dude dudgeon dyke egypt nomad nomenclature nominate noodle nook nookie noon noose poland pole polenta police policy polio polish politics poll pollen pollute polo polyandry polyester polymer polynesia polyp tiff vodka

**0x35 = 14;16 = D;F = 53 { duc dyi egr nas nor squ tok vog }** duchy duck duct dying egret nasal nasturtium nasty nordic normal norman north norway squad squall squander square squash squat squaw squawk squeak squeal squeeze squib squid squint squire squirm squirt token vogue

**0x36 = 14;23 = D;G = 54 { ang ard buo dos ego nit sop ste }** angel anger angle angler angola ardour buoy dose doss dossier ego nit nitrogen nitwit soprano steak steal steam steed steel steep stela stem stench stencil step stephen stereo sterling steroid stew stewardess

**0x37 = 14;24 = D;H = 55 { ara bui dop dye egg gri inq pon }** arab building dopamine dope doppler dye egg grid griddle grief grievance griffin griffon grill grime grin grind gringo grip gripe grist grit grizzle grizzly inquest inquire inquiry ponce pond ponder pong pony

**0x38 = 14;25 = D;I = 56 { def dwi eel ess mif myr nov vom }** deface defame default defeat defect defence defer deficiency deficit defile define deflate deflection deforest deform defraud defy dwindle eel essay essence essential miff myriad myrrh myrtle nova novel november novice novocaine vomit

**0x39 = 14;26 = D;J = 57 { bub doo dwe edu lap sce voo war }** bubble doodle doom doona door dwelling educate lap lapel lapland lapse laptop scenario scene scent voodoo war warble ward warden wardrobe ware warehouse warfare warm warn warp warrant warranty warren warrior wart

**0x3a = 14;34 = D;K = 58 { edg int meg pai rus sed sow vor }** edge integrate intellect intent intercept interest interface international internet interrupt interval interview intimate intoxicant intrigue introduce introvert megabyte pail pain paint pair ruse rush rusk russia rust sedan sediment seduce sow vortex

**0x3b = 14;35 = D;L = 59 { dee dwa euc lab lof mur rep ubi }** deed deep deepen deer dwarf eucalyptus eucharist euclid lab label labour labrador labyrinth loft murder repair repay repeal repeat replace replay replica reply report repository represent reprimand reproduce reptile republic repute ubiquity

**0x3c = 14;36 = D;M = 60 { dvo eig job sax sim swo tro udd }** dvorak eight job sax saxifrage saxon similar simmer simpler simple simulate swoon swoop sword swot trojan troll trolley trombone troops trophy tropics trot trotter trouble trough trousers trout trove trowel troy udder

**0x3d = 14;45 = D;N = 61 { das der dra ecz fab fen hyb ufo }** dash derby derelict derivative dermatitis drab dracula draft drag dragon dragonfly drain drake dram drama drambuie drape draper draw drawers drawl eczema fabian fable fabric fen fence fend fender fennel hybrid ufo

**0x3e = 14;46 = D;O = 62 { dip ecu exh jiv las por sph uga }** dip diploma diplomat dipole ecuador exhaust exhibit exhibitionism jive lasagna laser lash lass last porcelain porch porcini porcupine pore pork porpoise porridge port portable portal porter portfolio portion portrait portugal sphere uganda

**0x3f = 14;56 = D;P = 63 { dir ecs exi fre fur kim noi ugl }** director directory dirge dirt ecstasy exile exist exit freak freckle free freehold freelance freemason freestyle freeze freight frenzy frequent fresco fresher fresnel fret fur furl furnace furniture furrow fury kimono noise ugly

**0x40 = 15;11/66 = E;A = 64 { glu hug kio lag led mun stu ukr }** glucose glue glug glut gluten glutton hug kiosk lag lager lagoon led lederhosen ledge ledger munch stub stubble stucco stud student studio study stuff stumble stump stun stunt stupid stupor sturgeon ukraine

**0x41 = 15;12 = E;B = 65 { aba bea dul ecc huf rob sas uku }** abacus abandon abate abattoir beach beacon beads beagle beak beaker beam bean bear beard beast beat beau beauty beaver dull eccentric huff rob robbery robe robin robot robust sash sashay sassy ukulele

**0x42 = 15;13 = E;C = 66 { bla duk era jeh phi san smo ulc }** black blackberry blackboard blackfly blackjack bladder blade blah blame blanch blank blanket blast blaze blazer duke era eradicate erase erasmus jehovah philosophy sand sandal sandwich smock smog smoke smooth smoothie smoulder ulcer

**0x43 = 15;14 = E;D = 67 { dug ebb evi hus leu phl spa sue }** dugout ebb evict evidence evil husband hush husk husky hussy hustle leukaemia phlegm spa space spade spaghetti spain spam spank spanner spare spark sparrow spasm spastic spat spawn sue suede suet suez

**0x44 = 15;15 = E;E = 68 { eph hue imm kib kir min nad rac }** ephemera ephesus hue immerse immigrant immortal immune kibbutz kirsch mince mind mine mingle mini minimum ministry mink minnow minoan minor mint minuet minutes minx nada nadir raccoon race racist rack racket racoon

**0x45 = 15;16 = E;F = 69 { ave dub eat env epo lus phr rel }** avenger avenue aver average aversion avert dub eat envelope environment envoy envy epoch epoxy lush lust phrase relation relax relay release relent relevant reliable relic relief religion relish reload relocate reluctant rely

**0x46 = 15;23 = E;G = 70 { don ero lau mov mow nog ref soh }** don donate donkey donor erode erotic laud laudanum laugh launch laundry laurel move movie mow nog referee reference referendum refill refine reflect reflex reflux reform refrain refresh refrigerator refuge refund refuse soho

**0x47 = 15;24 = E;H = 71 { ado cre err gyp kis noe set soi }** adolescent adopt adore adorn cream create credit creed creek creep crematorium crepe crescent cress crest crete crevasse crevice crew errand error gyp gypsum gypsy kiss noe set setback settee settle setup soil

**0x48 = 15;25 = E;I = 72 { dov gut hye nob psy roo sea sik }** dove gut gutter hyena nob nobel noble nobody psychic psycho psyop roof rook rookie room root sea seafood seafont seagull seal seam seance sear search seashell seashore season seat seawall seaweed sikh

**0x49 = 15;26 = E;J = 73 { acr enf etc fee hoi puf sto tet }** acres acrobat acrylamide acrylic enforce etcetera etch fee feeble feed feedback feel hoist puff puffball puffin stoat stock stoic stomach stone stool stoop stop storage store stork storm story stout stove tetanus

**0x4a = 15;34 = E;K = 74 { che eur gum hoe jou muz pha tec }** cheat check checkout cheddar cheek cheep cheese chef chemical cheque cherry chess chest chestnut chew eureka europe gum gumption gumshoe hoe joule journal journey joust muzzle phantom pharaoh pharisee pharma phase technology

**0x4b = 15;35 = E;L = 75 { cap end evo kum net pep pif pup }** cap capable capacitor capacity cape caper capillary capital cappuccino capsule captain caption captive captor capture end evoke evolve kumquat net netherlands nettle network pep pepper peppermint pepsi peptide piffle pup pupil puppet

**0x4c = 15;36 = E;M = 76 { cum emo exu fib hod lyc ove pyr }** cumin emotion exude exult fib fibre fibreglass fibrillate fibrosis hod lycee lyceum lychee lycia oven over overall overcast overdose overdrive overflow overhaul overlook override oversight overthrow overtime overtone overview pyramid pyre pyrex

**0x4d = 15;45 = E;N = 77 { cru fad gou jug pik rum shy tef }** crucible crucify crude cruelty cruise crumb crumble crumpet crunch crusade crush crust crustacean crutch crux fad fade gouge gourmet gout jug juggernaut juggle jugular pike rum rumble ruminant rumour rump shy teflon

**0x4e = 15;46 = E;O = 78 { cui fag gos hoc nav rec sib tho }** cuisine fag faggot gospel gossamer gossip hockey nave navel navigate navy recall receipt reception recipe recital reckon recognise recommend record recover recreation recruit rector rectory recycle sibling thong thorn thou thought thousand

**0x4f = 15;56 = E;P = 79 { col cuff fak jod jum sau sic suc }** cola cold collaborate collapse collar colleague collect college collide colon colony colosseum colour colt column cuff fake fakir jodhpur jumble jump jumper jumpsuit sauce saucer saudi sauna sausage sick success suck sucker

**0x50 = 16;11/66 = F;A = 80 { cue emm fav god hix lum man tap }** cue emmy favour favourite god godsend godson hi lumber luminescence luminosity lump man manage manchego mandible mane manger manhole manhood maniac manifesto manner manor manual manufacturer tap tape taper tapestry tapeworm tapioca

**0x51 = 16;12 = F;B = 81 { emi fed gna kil lob mag pio tep }** emit federal fedora gnash gnat gnaw kilimanjaro kill kiln kilo kilt kilter lob lobby lobe lobster magazine magenta maggot magi magic magistrate magma magnesium magnet magnify magnitude magnolia magpie magyar pioneer tepid

**0x52 = 16;13 = F;C = 82 { asp fli hiv jab raf sif teq vel }** asp asparagus aspect asphalt aspire aspirin flick flicker flier flies flight flimsy flinch fling flint flip flippancy flipper flirt flit hive jab jabber raffle raft rafter sift tequila velcro velocity velum velvet

**0x53 = 16;14 = F;D = 83 { cpu dar dep ema giz hym piq vet }** cpu dare dark darling darn dart darwin department departure dependent depict deplete deploy depose deposit depot depreciate depress deprive depth deputy email giza gizmo gizzard hymen hymn pique vet vetch veteran veto

**0x54 = 16;15 = F;E = 84 { clo coy dan hys pax rag rur via }** cloak clock clod clog clone close closet clot clothing cloud clout clove clover clown coyote dance dandelion dandruff dandy danger dangle hysterectomy hysteria pax rag rage ragout rural viable viaduct viagra vial

**0x55 = 16;16 = F;F = 85 { bio cyb elu ico inj nap ras vig }** biochemistry biodiversity biofeedback biography biohazard biology bioluminescence biomass biome biometrics biophysics biopsy biotech bioweapon cyberspace elude icon iconoclast injury nap napalm nape naphtha napkin nappy rasher rasp raspberry vigil vigilante vignette vigour

**0x56 = 16;23 = F;G = 86 { cox elo gen ghe hun ima pak vio }** cox elope gen gender gene genealogy general generosity genie genitals genius genocide genome genre gent genus ghee gherkin ghetto hun hunch hundred hungary hunger hunk image imagine pakistan violate violence violet violin

**0x57 = 16;24 = F;H = 87 { arm coq elm ing ini mom pag sol }** armada armour arms army coquette elm ingot ingress initial mome moment momentum pagan page pageant pageboy pager pagoda solder soldier sole solicit solicitor solid soliloquy solitude solo solomon solstice solution solve solvent

**0x58 = 16;25 = F;I = 88 { cho cok elk ger inh inn mer vit }** chock chocolate choice choir choke cholesterol chomp choose chop chord chore chorizo chorus chosen coke elk geranium germ german inhabit inn innocent merchant mercury mercy merger merlot mermaid vitality vitamin vitreous vitriol

**0x59 = 16;26 = F;J = 89 { ech elf har inp jif kur rhi viv }** echelon echidna echo elf harbour hardcover hardware hare harem harlot harm harmonica harmony harness harp harpoon hart harvest inpatient input jiffy kurd rhineland rhinestone rhinitis rhino rhinoplasty rhizome viva vivacity vivid vivisection

**0x5a = 16;34 = F;K = 90 { eld imi ira kuw mim mir pie sca }** elderly imitate iran iraq kuwait mime mimic mimosa mirage mire mirror mirth pie piece pier pierce piety piezoelectric scab scald scale scalp scampi scan scandinavia scanty scapegoat scar scare scarecrow scarf scarlet

**0x5b = 16;35 = F;L = 91 { apo blu elb imb iso sel tam urd }** apollo apologise apoplexy apostle blubber blue  
bluebottle bluefin bluegrass bluff blunder blunderbuss blunt blur blurb blurt blush bluster elbow imbibe isolate  
isotope select self sell tambourine tame tamil tamp tamper tampon urdu

**0x5c = 16;36 = F;M = 92 { ape cig dia eng gob ilk ita siv }** ape aperativo aperture apex cigarette diabetes  
diadem diagnose diagonal diagram dial dialogue diameter diamond diaper diaphragm diarrhoea diary diazepam  
engage engineer england gob gobble gobbledegook gobi goblet goblin ilk italic italy siva

**0x5d = 16;45 = F;N = 93 { cid equ hut ile lod sie six sym }** cider equal equaliser equanimity equation  
equator equestrian equilateral equilibrium equine equinox equipment equity equivalent equivocate hut hutch ileum  
lode lodestar lodestone lodge siege siesta sieve six symbol symmetry sympathy symphony symposium symptom

**0x5e = 16;46 = F;O = 94 { cia eje igu jag pan sis vin wag }** ciao eject iguana jagged jaguar pan panama pane  
paneer panel pang panic pannier pansy panther panto pantry pants pantyhose siskin sissy sister vindaloo vine  
vinegar vino vintage vinyl wag wage wager wagon

**0x5f = 16;56 = F;P = 95 { ana chl cub eja igl jan sit ver }** anaconda anaemia analyse anatomy chlamydia cub  
cuba cubbyhole cube cubicle cubit ejaculate igloo jangle january sit site situate veracity verb verdict verge verger  
verify vermin versatile verse version vertex vertical vertigo verve

**0x60 = 23;11/66 = G;A = 96 { blo jus kwa lew liq pes pir rol voc }** bloat blob block blockbuster blog bloke  
blonde blood bloom blossom blot blouse blow justify kwai lewd liqueur liquid liquidiser liquorice peso pest pester  
pesticide pestle pesto pirate role roll vocabulary vocal vocation

**0x61 = 23;12 = G;B = 97 { aqu ass aud gha ido kri lib rug ump }** aquamarine aquarium aquifer ass  
assassinate assault assay assembly assert assess assets assign assist associate assume assure audience audio audit  
auditorium ghana idol krill libel liberal liberia libido library libya rug rugby umpire

**0x62 = 23;13 = G;C = 98 { beb exp gey gib idl koa mum sab vou }** bebop expand expat expect expense  
experience expert explain explode exploit explore export expose express geyser gibber gibbet gibbon gibe giblets  
gibraltar idle koala mum mumble mummy mumps sabbath sabotage vouch voucher vouchsafe

**0x63 = 23;14 = G;D = 99 { apa bav chr fut get peb rat sho sys }** apache apartment apathy bavaria christ  
chrome chromosome chronicle futon future getaway pebble rat ratchet ratio rational rationale rattlesnake shoal  
shock shoes shoot shop shore short shot shoulder shout shove shovel show system

**0x64 = 23;15 = G;E = 100 { bas cle dah feu jih juk tic une vul }** base baseball basement bash bashful basic  
basil basin basis bask basket bass bastard clean clear cleft clematis clergy clerk dahlia feud feudalism jihad jukebox  
tick ticker ticket tickle unemployment vulnerable vulture vulva

**0x65 = 23;16 = G;F = 101 { cen eva fev ici kos nei spe unf wad }** census cent centre century evacuate evade  
evaluate evanescence evangelist evaporate fever feverfew icicle kosher neighbour speak spear species specimen speck  
specs spectrum speed spell spelt spend sperm spew unfortunate wad wade wadi

**0x66 = 23;23 = G;G = 102 { fic ica jup log mef moi she tid tun }** fickle fiction icarus jupiter log logic logo  
mefloquine moisture sheaf shear sheath shed sheep sheer sheet sheikh shelf shell shelter sheriff sherry tiddler  
tiddlywinks tide tidy tuna tune tungsten tunic tunisia tunnel

**0x67 = 23;24 = G;H = 103 { dab fiz gec ibi lex rav ris spo tim }** dab fizz fizzle gecko ibis lexicon ravage rave  
raven ravine ravioli ravish rise risk risotto spoil spoke sponge sponsor spoof spook spool spoon spore sport spot  
spouse spout timber time timetable timid

**0x68 = 23;25 = G;I = 104 { acc foa gau gea jil mul tag thu unz }** accent accept access accessory accident  
accommodate accompany accordance accost account accredit accuracy accused foal foam gauge gauss gauze gear  
jilt mule mull multimedia multiple tag thud thug thumb thump thunder thursday unzip

**0x69 = 23;26 = G;J = 105 { cac cze foe gag gay jit men spr upb }** cacao cache cachet cactus czech foe foetus  
gag gaga gaggle gay jitter menage mend mensa menthol mention menu sprain sprat sprawl spray spread spree sprig  
spring sprinkle sprint sprog sprout spruce upbeat

**0x6a = 23;34 = G;K = 106 { fog gad gaw kre lea peo sem toa upd }** fog fogey gad gadfly gadget gawk  
kremlin leach lead leaf league leak lean leap learn lease leash leather leave leaven people semantics semen semester  
semi semiconductor seminar toad toadstool toady toast update

**0x6b = 23;35 = G;L = 107 { fos hyg jur kor mog num opt pat upg }** fossil foster hygiene jury koran korea  
korma mogul numb numbat number numismatics opt optics optimist optimum option optometry pat patch pate  
patent path pathology patient patio patriot patrol patron patsy pattern upgrade

**0x6c = 23;36 = G;M = 108 { baf bal bin cyr fox fug gur let raw }** baffled balance balcony bald bale bali ball  
ballad ballet balloon ballot balm balsa balti bin binary bind binge bingo binoculars cyrillic fox foxglove foxtrot  
fugitive fugue guru let lech letter lettuce raw

**0x6d = 23;45 = G;N = 109 { azu cas ent fum gao jov lah orc rif }** azure cascade case cash cashew cashmere casino cask casket casserole cassette cast castle casualty enterprise entertain entice entire entity entry fumble fumes gaol jove lahore orca orchard orchestra orchid riff rifle rift

**0x6e = 23;46 = G;O = 110 { bez bod bos cyn fem gaf her pox rig }** bezel bod bode bodge bodice body bodyguard bosch bosnia bosom boss cynicism female femur gaffer herald herb herbal herd heresy heritage hermit hero heroin heron herpes herr herring pox rig right rigid

**0x6f = 23;56 = G;P = 111 { bac bih fon gap hak reo tao tot tou }** baccalaureate bacchus bachelor bacillus back backgammon background backpack backside backstage backup bacon bacteria bihar fondle fondue font gap gape hake reorganize taoist tot total tote totem touch tough toupee tour tournament tout

**0x70 = 24;11/66 = H;A = 112 { bog foi gae gas gav had moc mon tuc }** bog bogan bogey boggle foible foil foist gaelic gas gash gasket gasoline gasp gastronomy gavel gavotte hades mock monarch monday monetarist money mongoose mongrel monitor monk monkey monopoly monster month monument tuck

**0x71 = 24;12 = H;B = 113 { bir cyl fra fuz gee mem moh nia tud }** birch bird biro birth cylinder fraction fracture fragment fragrance frame france franchise frank fraternity frau fraud fray frazzle fuzz gee geezer member membrane memento memo memoir memory mohair mohammed mohican naive tudor

**0x72 = 24;13 = H;C = 114 { gei gyn inf ket kry rei rer tom tue }** geiger geisha gyno infamy infant infantry infatuate infect inferno infidelity infinity inflame inflict influx info infringe ketamine ketchup ketone kettle kryptonite reign reimburse rein rerun tomato tomb tomboy tomcat tome tomorrow tuesday

**0x73 = 24;14 = H;D = 115 { bic fir gel jut leb nex plu rit tat }** bicarbonate bicentennial biceps bicycle fir fire firefly firewall firm first gel gelatine jute lebanon nexus pluck plug plum plumber plume plummet plump plunder plunge plural plus plush plutonium rite ritual ritz tattoo

**0x74 = 24;15 = H;E = 116 { cad gem ins nea pse riv tau tug wra }** cad caddy cadence cadet cadmium cadre gem gemini insect insert inside insist inspect install instant instinct institute instructions insulin insult insure near pseudo rival river rivet taupe tug wraith wrangle wrap wrath

**0x75 = 24;16 = H;F = 117 { coc eye gyb hit jap moz pod reu tav }** cocaine cock cockatiel cockatoo cackle cockney cockpit cockroach cocktail cocoa coconut cocoon eye eyebrow eyelet eyelid eyesore eyewitness gybe hit hitch hitler hitman japan jape mozambique mozzarella pod podcast podium reunion tavern

**0x76 = 24;23 = H;G = 118 { fly ful guz jar lou mit omn tan taw }** fly flyer flyover flywheel fulfil guzzler jar jargon loud loudspeaker lounge louse lout louvre mit mite omnibus omniscient omnivore tan tandoori tang tanga tangerine tangle tango tank tanker tantra tantrum tanzania tawny

**0x77 = 24;24 = H;H = 119 { fuj jas jow ker kud nay rid tru wit }** fuji jasmine jasper jowl kerb kernel kerosene kudos nay naysayer rid riddle ride ridge truancy truce truck truffle trumpet truncate truncheon trundle trunk truss trust truth witch withdrawal withers withhold withstand witness

**0x78 = 24;25 = H;I = 120 { fas fru giv jau lup mos pov sla xer }** fascia fascinate fascist fashion fast fastener fructose frugal fruit frustrate give jaundice jaunty lupin lupus mosaic mosque moss poverty slab slack slag slam slander slap slash slat slate slav slave slay xerox

**0x79 = 24;26 = H;J = 121 { epi gup jav kit lai lym mol ope pyl }** epic epidemic epidural epilepsy epileptic epilogue epiphany episode epistle epitaph epithelium epitome guppy java javelin kit kitchen kite kitsch kitten kitty lair laird lymph molasses moldova mole molest open opera operate pylon

**0x7a = 24;34 = H;K = 122 { adu gow jay mee opp puk rea roa who }** adult gown jay jaywalk meek meet opportunity oppose oppress puke reach react reactor read reagent real realm ream reap rear rearrange reason road roam roar roast whodunit wholemeal wholesale whoop whopper whore

**0x7b = 24;35 = H;L = 123 { enc gun jee kid naz pyt rho sco wou }** encode encore encounter encourage encrypt encyclopaedia gun jeep jeer kid kidnap kidney nazareth nazi python rhodes rhodium rhododendron rhone scold scone scoop scooter scope scorch score scorn scotch scotland scout scowl wound

**0x7c = 24;36 = H;M = 124 { fou guj hex lin lyi lyn pix qat rhe }** foul found foundation foundry fount four gujarat hex hexameter line linen liner lingerie lingo linguine links lino linseed lint lintel linux lying lynch lynx pi pixel pixie qatar rhein rhesus rhetoric rheumatic

**0x7d = 24;45 = H;N = 125 { adj boo got guf guy nau oxy rew wel }** adjust boo boob boogie book bookie boom boomerang boost boot booth booty booze gothic guffaw guy guyana naughty nausea oxyacetylene oxygen oxytocin reward rewind rework rewrite welcome weld welfare well wellington welt

**0x7e = 24;46 = H;O = 126 { adi ant fus gop gub gym lyr mam org }** adieu ant antacid antarctic antenna anthem anthropology antibody antic antidote antigua antique antler fuse fuselage fusion fuss gopher gubbins gym gymkhana lyre lyric mama mambo mammal mammography mammon mammoth organise orgasm orgy



**0x7f = 24;56 = H;P = 127 { adh amb gry gyr hig jui mix ori tor }** adhesive ambassador amber ambiguity  
ambition ambulance ambush gryphon gyre gyro high highland highlight highway juice mix mixology orientation  
original orion tor torah torch torpedo torque torrent torso tortellini tortoise tortoiseshell torture tory

**0x80 = 25;11/66 = I;A = 128 { ada fac gog goy hap hav moa osc sum }** adaptor facade face faceplate facial  
facility facsimile fact faction factor factory factotum faculty goggles goy happen happy havana haven haversack  
havoc moan moat oscar oscillator oscilloscope sum summary summer summit summons sump

**0x81 = 25;12 = I;B = 129 { gan gnu hau inc iri lac nai put wus }** gander gandhi gang gangster gnu haul  
haunt inc incarcerate incense incest inch incision incite include income increase increment incur iridescence iris  
irish lace lack lacquer lacrosse lactate lactose nail naivety putty wuss

**0x82 = 25;13 = I;C = 130 { fis gno haw hyd isl mal mob puz wyv }** fish fishnet fission fist gnome hawk  
hawser hydra hydrate hydraulics hydrocarbon hydrochloric hydrogen islam island isle mal- malaria malawi  
malaysia maldives male mali mall mallard mallet malt malta mob mobile puzzle wyvern

**0x83 = 25;14 = I;D = 131 { acu gue hec iro nam ner pyg rom win }** acute guernsey guerrilla guess guest  
heckler hectare iron ironmonger irony name namibia nerve pygmy roma roman romance romania rome romp win  
wince winch wind windmill window windscreen wine wing wink wrinkle winter

**0x84 = 25;15 = I;E = 132 { emb geo hed hes luc mak mea ova rex }** embargo embark embarrass embassy  
embed ember emblem embody embrace embroider embroidery embryo geography geology geometry geophysics  
hedge hedgehog hesitate luck make makeup meadow meal means measles measure meat oval ovary ovation rex

**0x85 = 25;16 = I;F = 133 { cow git hee hir his muc pas pav xia }** cow coward cowboy cower cowl cowpox git  
heed heel hire hispanic hiss histogram history muck mucus pass passage passenger passion passive passport password  
past pasta pastor pastry pasture pave pavement pavilion xian

**0x86 = 25;23 = I;G = 134 { cov gig hen nan noa pec raj sur xma }** covariance cove covenant cover covert  
covet gig gigabit giggle gigolo hen henna nanny nano- noah pecan peck pecks raj surf surface surge surgery  
surname surplus surprise surrender surrogate surround survey survivor xmas

**0x87 = 25;24 = I;H = 135 { cos eav kar mud pea piv rak rap xyl }** cosh cosmetic cosmos cost costume cosy  
eaves eavesdrop karaoke karate karma mud muddle pea peabody peace peach peacock peak peal peanut pear pearl  
peasant peat pivot rake rap rape rapid rapper xylophone

**0x88 = 25;25 = I;I = 136 { act dro fig hib hik jes mug rai ral }** act dromedary drone drool droop drop  
dropout drosophila dross drought drove drown drowsy fig fight figure figurehead hibernate hibiscus hike jest jesuit  
jesus mug mugger raid rail rain rainbow raise raisin rally

**0x89 = 25;26 = I;J = 137 { gin gis hic ide jog lye map pet swi }** gin ginger gingivitis ginkgo gist hiccup  
hickey idea idealist identify jog lye map maple pet petal petition petrify petrol petticoat swift swig swill swim  
swindler swine swing swipe swirl swiss switch swivel

**0x8a = 25;34 = I;K = 138 { deb gim hie hij idi ram typ unw yak }** deb debase debate debauchery debilitate  
debit debrief debris debt debug debunk debut gimmick hierarchy hijab hijack idiom idiosyncrasy idiot ram rama  
ramp rampart type typhoid typhoon typhus typist typo unwind unwrap yak

**0x8b = 25;35 = I;L = 139 { bur hid hil juj kna paw ran too yal }** burden bureau burger burgundy burial  
burka burn burp burr burrow burst burundi hide hill hilt jujitsu knack knapsack knapweed knave paw pawn  
pawpaw ranch randy range rank ransom rant tool tooth yale

**0x8c = 25;36 = I;M = 140 { att beg hoa ign nir rab rar tos yam }** attach attack attain attempt attend  
attention attic attire attitude attorney attract attribute beg beget beginning begonia begrudge beguile hoard hoax  
ignite ignominy ignore nirvana rabbi rabbit rabble rabies rare tosh toss yam

**0x8d = 25;45 = I;N = 141 { aff gif gor hop jok nig pis toy yap }** affairs affect affidavit affiliate affinity  
affirmative affix affluence afford affray affront gift gore gorge gorilla gorse hop hope joke nigeria niggle night  
nightcap nightie nightjar nightmare pistachio pistol piston toy toyota yap

**0x8e = 25;46 = I;O = 142 { acn ele gia hei hew hov mor nar tuf }** acne elect electric elegant elements  
elephant elevate eleven giant heifer height heir heist hew hovel hover moral mormon morning morocco moron  
morphine morris morse morsel mortgage mortuary narcotic narrative narrow tuff tuft

**0x8f = 25;56 = I;P = 143 { ack fid gho het how nut reg tut wri }** acknowledge fiddle fidelity fidget fiduciary  
ghost heterosexual howl howler nut nutmeg nutrient regard regenerate reggae regime regiment regina region register  
regress regret regular tut tutor wriggle wring wrinkle wrist writ write writhe

**0x90 = 26;11/66 = J;A = 144 { hul ill ink loz pau pus roz sti twa }** hulk hull ill illegality illegitimate  
illiterate illuminate illusion illustrate ink lozenge paunch pauper pause push puss pussy pussyfoot rozzer stick stiff  
stigma stile stilt stilton sting stingray stink stir stitch twang twat

**0x91 = 26;12 = J;B = 145 { akk ato fij gla hem hep hog sin umb }** akkadian atoll atom fiji glacier glad glade gladiator glamour glance gland glare glass glaze glazier hem hemisphere hemp hepatitis hog hogan hogwash hogweed sin sinew singapore single sink sinner sinus umbilical umbrella

**0x92 = 26;13 = J;C = 146 { aja ann ano cal fif jon obe rot unl }** ajax annex anniversary annon annotate announce annoy annual anorak anorexia calabrese calamari calcium calculator calculus caldera calendar calf call calm calorie fifty jong obelisk obese obey rot rota rotate rotor unload unlock

**0x93 = 26;14 = J;D = 147 { ais aph bad cri exc hef kan obl tol }** aisle aphid aphrodite bad badge badger badminton crib cricket crime crimp crimson cringe cripple crisis crisp criterion criticism exceed except excess exchange exclusive excrement excuse hefty kangaroo oblige oblique oblivion tolerance toll

**0x94 = 26;15 = J;E = 148 { aim apr jam kee lam nil pap rop uph }** aim april apron jam jamaica jamb jamboree keel keen keep lama lamb lambda lame lament laminate lamp nil pap papa paparazzo papaw papaya paper papilloma pappa paprika papua papyrus rope uphold upholstery

**0x95 = 26;16 = J;F = 149 { aik are but lad loa nih poi roq upt }** aikido area arena butane butch butcher butler butt butter buttercup butterfly buttocks button buttress lad ladder laden ladle lady ladybird load loaf loam loan loath nihilist poignancy point poison roquefort uptake uptown

**0x96 = 26;23 = J;G = 150 { aid amp arg bug fez jor the ura wai }** aid amp amphetamine amplifier amplitude ampule argentina argue bug bugbear bugle fez jordan theatre theft theism theme theory therapy thermal thermometer thermos thesaurus thesis uranium uranus waif waist waistcoat wait waiter waiver

**0x97 = 26;24 = J;H = 151 { ari few heb hom jun lep moo ure wie }** aria arise few hebrew home homeless homeopathy homework homicide homo junction juncture june jungle junior juniper junk junket junkie junkyard junta leper leprechaun leprosy moo mood moon moose moot urea urethra wield

**0x98 = 26;25 = J;I = 152 { ars hay kas mae mus tig usu vir wan }** arse arson hay kashmir maestro muscle muse museum mush mushroom music musk musket muslim mussel mustard tiger tightrope tights usurp usury virile virile virtue virtuoso virus wan wand wane wangle wannabe want

**0x99 = 26;26 = J;J = 153 { arr asc gua hax loy rov til ute ven }** arrange array arrest arrival arrow ascent ascii guacamole guadeloupe guam guarantee guard guatemala ha loyalty rove tile till tilt utensil uterus vendetta vendor veneer venezuela vengeance venice venison venom vent venture venue

**0x9a = 26;34 = J;K = 154 { agn asi cay jer kay mai nie sli uti }** agnostic asia aside cay cayenne cayman jeremiah jerk jerry jersey jerusalem kayak maid mail maim main maintain maize niece slice slick slide slim slime sling slink slip slit slither sliver utilise utility

**0x9b = 26;35 = J;L = 155 { atl jot liv pay roy tab tip uto wim }** atlantic atlas jot live livelihood liver livery livestock pay payback payday payload payoff payroll royal tab tabasco tabby tabernacle tablature table tableau tablespoon tablet tabloid taboo tip tipple tiptoe utopia utopian wimp

**0x9c = 26;36 = J;M = 156 { aci and dys fit gaz nug tad tir tre }** acid andes andorra dysentery dysfunction dyslexia dyspepsia dystopia dystrophy fit gaza gaze gazebo gazelle gazette nugget tad tadpole tirade tiramisu tire treacle tread treasure treat treaty tree trek tremor trench trend trespass

**0x9d = 26;45 = J;N = 157 { ame atr fes oes pen pou soo tob wip }** amend amenities america amethyst amex atrium atrophy festival oestrogen pen penalty pencil pendant pendulum penguin peninsula penis penitent penny pension pouch poultry pounce pound pour pout soot soothe tobacco tobago toboggan wipe

**0x9e = 26;46 = J;O = 158 { aus del fel lys nui quo ruc sov tod }** australia austria delay delegate delete deli delicatessen delight deliver dell delta delude deluge feline fell fellatio fellow felon felt lysis nuisance quoit quorum quota quote quotient rucksack sovereign soviet today toddler toddy

**0x9f = 26;56 = J;P = 159 { abo axi gre lub ogl poo rud soy tof }** abode abolish aboriginal abort abound above axiom axis grease great grebe greece greed green greenland greet grenada grenade grey lubricant ogle poodle poof pool poop poor rudder soy soya toff toffee tofu

**0xa0 = 34;11/66 = K;A = 160 { afr all bai les ogr rue spl spy var }** africa allah allergy alley alliance allies alligator allocate allotment allow alloy allure bail bait lesbos lesion lesson ogre rue splash spleen spliff splint splinter split spy spyware variable variety varnish varsity vary

**0xa1 = 34;12 = K;B = 161 { bak cot fol gal goa ohm ruf sty wiz }** bake bakelite cot cottage cotton fold folder foliage folk follow folly gala galaxy gale galileo gall gallery galley gallon gallop gallows galway goa goad goal goat goatee ohm ruffle style stylus wizard

**0xa2 = 34;13 = K;C = 162 { bap bou boy kaz oil pul run sud woa }** bap baptism boudoir bough boulder boulevard bounce bound boundary bounty bouquet bout boutique boy boycott boyfriend kazakhstan oil pull pulley pulp pulpit pulse run runaway rune rung runt runaway sudan sudoku woad

**0xa3 = 34;14 = K;D = 163 { baw bol gly hip oin rui sug sup wob }** bawd bawl bold bolivia bolt glycerol glycine glycogen glycol glyph hip hippie hippo hippocampus hippodrome hipster ointment ruin sugar suggest sup superintendent supermarket supervisor supper supple supplement supply support suppose suppress wobble

**0xa4 = 34;15 = K;E = 164 { bay bob fea oki rul syp vac wat woe }** bay bayonet bob bobble bobcat fear feasible feast feat feather feature okinawa rule syphilis syphon vacancy vacation vaccine vacillate vacuum watch watchdog watchtower water watercolour watermark watermelon waterproof watershed watt wattle woe

**0xa5 = 34;16 = K;F = 165 { baz fei lat lig okt spu try vat wok }** bazaar bazooka feign latch lateral latex lathe lather latin latitude latrine latte lattice latvia ligament ligand light lightning lightweight oktoberfest spud spunk spur spurn spurt sputnik try tryptophan tryst vat vatican wok

**0xa6 = 34;23 = K;G = 166 { afg agg big cli nak new oct old taf }** afghanistan aggregate aggression bigamy bigot bigwig click client cliff climate climax climb cling clinic clip clique clitoris naked newel newfoundland newlywed news newt newtonian oct octane octave octet octopus old taffeta taffy

**0xa7 = 34;24 = K;H = 167 { abd aet bah bid ham ole rup tah wea }** abdomen abduct aetiology bahai bahamas bahasa bahrain baht bid biddy bidet ham hamlet hammer hammerhead hammock hamper oleander rupee tahini tahiti weak weaken weal wealth wean weapon wear weasel weather weatherproof weaver

**0xa8 = 34;25 = K;I = 168 { abe abi bib gar hob oed ric rim ted }** abet abide ability bib bible bibliography garage garb garbage garden gargoyle garland garlic garment garner garrison hob hobbit hobby hobgoblin hobnail hobnob hobo oedema rice rich ricin rickshaw ricotta rim teddy tedium

**0xa9 = 34;26 = K;J = 169 { abu neu occ oly rha thi thy tum zap }** abundant abuse neuron neurotic neuter neutral neutron occasion accident occidental occlude occult occupy occur olympics rhapsody thick thief thigh thimble thin think third thirst this thistle thyme thyroid tumble tummy tumour zap

**0xaa = 34;34 = K;K = 170 { ach bel bew cob juv oma plo tib zea }** ache achieve belarus belch belfry belgium believe bell belly belong beloved belt beware bewilder bewitch cob cobalamin cobalt cobbler cobblestone cobra cobweb juvenile oman plop plot plough plover ploy tibet tibia zeal

**0xab = 34;35 = K;L = 171 { aco fue gli lia omb sil tac tie zeb }** acorn acoustic fuel glide glimmer glimpse glint glisten glitch glitter liable liaison liar ombudsman silage silence silhouette silica silicon silk sill silly silt silver tack tackle taco tact tactics tie tier zebra

**0xac = 34;36 = K;M = 172 { acq bab bli dai dat fud jeo toi zeo }** acquire acquit baba babble babel baboon baby babylon babysitter blight blimp blind bling blink blip bliss blister blitz blizzard daily dainty daiquiri dairy daisy data date datum fudge jeopardy toil toilet zeolite

**0xad = 34;45 = K;N = 173 { adr fin mes omi pad pop rhu yan zep }** adrenal adriatic fin final finance finch find fine finger fingerprint finish finland mesh mess message omit pad paddle paddock paddy padre pop popcorn pope poplar poppadom poppy populate rhubarb yang yank zeppelin

**0xae = 34;46 = K;O = 174 { aeg arc dit fuc jal jud mas wir zer }** aegean aegis arc arcade arch archer architect archive arctic ditch dither ditto fuchsia jalfrezi judaism judder judge judiciary judo masculine mash mask masochist mason mass massage mast master masturbate wire wireless zero

**0xaf = 34;56 = K;P = 175 { aer ble bon dio fry lee ona wol zes }** aerial aerosol bleach bleat bleed bleep blemish blend bless bond bondage bone bonfire bong bongo bonk bonnet bonsai bonus diode dioxide dioxin fry lee leech leek leer leeway onanism wold wolf zest

**0xb0 = 35;11/66 = L;A = 176 { aft cav dim foy lan mou onc won zeu }** afternoon aftertaste cavalcade cavalier cavalry cave caveat cavern caviar cavity cavort cavy dim dime dimension foyer lance land landlord landmark lane language lantern mould mound mount mouse mouth oncology wonder wont zeus

**0xb1 = 35;12 = L;B = 177 { bec cam dil fow oni pot sav wow zig }** beckon become cam camber cambridge camel camembert camera camomile camp campaign campus dildo dilemma dill fowl onion pot potato potential pottery potty savage savannah savant save saviour savour savvy wow wowser zigzag

**0xb2 = 35;13 = L;C = 178 { abh agi bun die jux muf onl vol wro }** abhor agile agitate bun bunch bundle bung bungalow bungee bunk bunker bunny bunsen die diesel diet juxtapose muff muffin muffle muffler mufti onlooker volatile volcano volley volt volume volunteer voluptuous wrong wrote

**0xb3 = 35;14 = L;D = 179 { ago dic fop jak shi sun swe xen zim }** agonist agony dice dick dictionary fop jakarta shield shift shiitaki shim shin shine ship shirk shirt shiver sun sunday sunglasses sunset sunshine swear sweat sweater swede sweep sweet swerve xenon xenophobia zimbabwe

**0xb4 = 35;15 = L;E = 180 { abr agr bor deg dig fun jea soj yac }** abrasive agree agriculture bordello border bore born borogrove borough borrow degenerate degrade degree dig digest digit digitalis dignity fun function fund fundamental funeral fungi fungus funk funnel funny jealousy sojourn yacht yack

**0xb5 = 35;16 = L;F = 181 { alc ded fom mis nuz pac reb yah zio }** alcohol alcove dedicate deduce deduct foment miser mishap mislead miss missile mission mist mistake mistletoe mistress nuzzle pace pacific pack package pact rebate rebel rebirth reboot rebound rebuild rebuke yahoo yahweh zion

**0xb6 = 35;23 = L;G = 182 { alm bot dau kaf nyl sle sui wif zip }** almond alms botany botch bother botox botswana bottle bottom daub daughter daunt kaftan nylon sleaze sled sledge sleek sleep sleet sleeve sleigh sleuth slew suicide suitable suitcase suite suitor wife wifi zip

**0xb7 = 35;24 = L;H = 183 { alp ber det kai lev nep nym yaw zir }** alphabet alps berber bermuda berry detach details detain detect deter detergent deteriorate determine detest detox kaiser levant levee level lever leviathan levity levy nepal nephew nephron nepotism neptune nympho yaw yawn zircon

**0xb8 = 35;25 = L;I = 184 { amm doc fil foc oaf pos syr yes zit }** ammo ammonia doc dock doctor doctrine document filch file fill filly film filter filth focus oaf pose position posse possess possible post postdoc poster postscript posy syria syringe syrup yes yesterday zit

**0xb9 = 35;26 = L;J = 185 { amn bud dod fob lef oak wal yog zod }** amnesia amnesty budapest buddha buddleia buddy budge budget budgie dodder doddle dodge dodgem dodo fob left leftism leftover oak wales walk walkman wall wallet wallpaper wally walnut walrus waltz yoga yoghurt zodiac

**0xba = 35;34 = L;K = 186 { amo aut kak neo oar pee tas yok zom }** amoeba amortise authenticate author autism auto autobiography autograph automatic autonomy autopsy autumn kaki neoconservative neolithic neon neophyte neoprene oar pee peek peekaboo peel peep peer peeve task tasmania taste yoke yokel zombie

**0xbb = 35;35 = L;L = 187 { dog fjo lem oas pit tin vis you zon }** dog dogma fjord lemma lemon lemonade oasis pit pitch pitcher pith pity tin tinder tinker tinkle tinnitus tinsel tint visa visage viscosity viscount vishnu visible vision visit visor vista young youth zone

**0xbc = 35;36 = L;M = 188 { cun cys dol fix nur pho ret zil zor }** cuneiform cunnilingus cunning cyst cysteine dole doll dollar dolly dolphin fix nursery phobia phoenix phone phony phosphorescence photo photon retail retain retch retina retire retreat retrieve retro retrovirus return zilch zillion zoroaster

**0xbd = 35;45 = L;N = 189 { cul cyt fiv hin jed sal shu zin zuc }** cull cult culture cytokine cytology fiver hind hinder hindu hinge hint jeddah salad salary sale salmon salon salsa salt salute salve salvo shudder shuffle shun shunt shut shutter shuttle zinc zine zucchini

**0xbe = 35;46 = L;O = 190 { cud dad div dou nec obi roe voy zul }** cud cuddle cudgel dad dado diva divan diver diverse divert divide dividend divine divorce divulge double doublet doubloon doubt dough necessity neck necklace necrophilia necrosis nectar nectarine obit roe voyage voyeur zulu

**0xbf = 35;56 = L;P = 191 { bul cuc dag dru obj pal vau zyg }** bulb bulgaria bulge bulk bull bullet bulletin cuckold cuckoo cucumber dag dagger drudge drug druid drum drunk object pal palace pale palestine palette pall pallet pallor palm palsy vaudeville vault zygote

**0xc0 = 36;11/66 = M;A = 192 { cry dal neg ont red veg whe yod }** cry crypt crystal dal dale negative neglect negligee negotiate negro ontology red redeem redevelop redhead redirect redistribute reduce vegan vegetable wheat wheedle wheel wheelbarrow wheelchair wheeze whelk wherry whet whey yodel

**0xc1 = 36;12 = M;B = 193 { bus daw lay luf obo tex vei wor }** bus bush bushel business busker bust bustle dawdle dawn lay layer layman layoff layout luftwaffe oboe text textile texture veil vein worcester word work workout workshop world worm worry worship worth

**0xc2 = 36;13 = M;C = 194 { daz dri eli jaz low nat vie yem }** daze dazzle dribble drier drift driftwood drill drink drip drive drivel drizzle elicit elide eligible elijah eliminate elite elixir jazz low lower lowercase natal national native nature naturist vietnam view yemen

**0xc3 = 36;14 = M;D = 195 { ama dei nun rej slo und vip yen }** amateur amaze amazon deism deity nun reject rejoice rejoin rejoinder rejuvenate slob slog slop slope slot sloth slow under undergrad underground underline undermine understand undertake underwear underworld undress vip viper yen

**0xc4 = 36;15 = M;E = 196 { alt beh dex jaw mat ple voi yeo }** altar alternative altitude behaviour behead behemoth behest behind behold behoove dexterity dextrose jaw mat match mate material maternity maths matrix matter mattress mature plea please pleat pledge plenty voice void yeoman

**0xc5 = 36;16 = M;F = 197 { ace did gat met oce ten vot wed }** acetone didactics diddle gate gateau gatecrasher gathering gator metabolism metal meteor meter method methodist metro ocean ten tenant tend tender tennis tenor tense tension tent tenure votary vote wed wedge wednesday

**0xc6 = 36;23 = M;G = 198 { cau cod cyp och pin vow wei yet }** caucasus caucus cauliflower cause caution cod code codeine codex codger codicil codpiece cypress cyprus ochre pin pincer pinch pine pineapple ping pink pinnacle pinole pint vow vowel weigh weir weird yeti

**0xc7 = 36;24 = M;H = 199 { alb dot irr ocu sob spi wis yew }** albania albino album dot dote irradiate irrational irregular irrigate irritate ocular sob sober spice spider spike spill spin spinach spine spire spirit spit wisdom wise wish wishbone wisp wisteria wistful yew

**0xc8 = 36;25 = M;I = 200 { adv cer doz glo jem lor waf yid }** advance advantage advent adventure advert advice advocate ceramic cereal ceremony certificate cervix doze dozen glob globe glogg gloom glop glory gloss glossary glove glow jemmy lord lore lorry wafer waffle yiddish

**0xc9 = 36;26 = M;J = 201 { aga dam dry maj odi sat wak yie }** aga agape agar agate agave dam damage dame damn damp damsel damson dry drywall majesty major majorette odium satan sate satellite satiate satin satire satisfy saturate saturday saturn wake waken yield

**0xca = 36;34 = M;K = 202 { age due gai gru nuk rem wav yin }** age agenda agent duel duet gaia gaiety gain gait gaiter grub grubby grudge gruel grumble grumpy grunge grunt nuke rem remain remark remedy remember reminder remote remove remunerate wave waver yin

**0xcb = 36;35 = M;L = 203 { cit dem duf hor ody web wom yob }** citadel cite citizen citrus city demand demean dementia demise demo democracy demographic demolish demon duff duffle horde horizon hormone horn horny horror horse horseradish odyssey web webcam woman womb wombat yob

**0xcc = 36;36 = M;M = 204 { add adm ala dur hum ipo ser wen }** add adder addict addition address administer admiral admit alarm durable duration hum human humble humid humiliate humour hump humus ipod serb serbia serf sergeant serial sermon serpent serum serve wench wend

**0xcd = 36;45 = M;N = 205 { aca anc den dus lim osm wes woo }** academic anchor anchovy ancient den denial denim denmark denote density dent dentist deny dusk dust limb limbo lime limerick limited limo limp limpet osmosis west westminster woo wood woodpecker woof wool

**0xce = 36;46 = M;O = 206 { aby dut gab mad osp pra pun wet }** abyss dutch duty gab gaba gabble gable gabon madagascar madonna madras osprey practice prague prairie praise pram prank prate prawn pray pun punch puncture pundit punish punk punt punter wet wetland

**0xcf = 36;56 = M;P = 207 { bru eag hoo isr peg req yar yol }** bruin bruise brummie brunch brunette brunt brush brute eager eagle hooch hood hoof hook hooker hooligan hoops hoot hoover israel peg pegasus request requiem require requisite requite yard yarn yarrow yolk

**0xd0 = 45;11/66 = N;A = 208 { caf hon mil noz opi tes yea yor }** cafe caffeine honduras hone honesty honey honeymoon honeysuckle honk honour mildew mile militant military milk mill millennium millet million nozzle opinion opium test testament testicle testify testosterone year yearn yeast yore

**0xd1 = 45;12 = N;B = 209 { bee bef lut orb oui pur tel yel }** bee beech beef beehive beep beer beet beetle befriend befuddle lute orb orbit ouija purchase purdah puree purge purple purpose purr purse pursue telecom telephone telescope tell telly yell yellow yelp

**0xd2 = 45;13 = N;C = 210 { bei hel lux ost oun swa tee yug }** beige beijing helicopter helium helix hell hello helm helmet help lux luxembourg luxury osteoarthritis ostrich ounce swab swag swallow swamp swan swap swarm swat sway tee teem teenager teepee teeth yugoslavia

**0xd3 = 45;14 = N;D = 211 { bev cus des gui lur ott ous yul }** beverage bevy cushion cusp cuss custody customer describe desert design desire desist desk despite dessert destination guide guild guile guillotine guilt guinea guise guitar lurch lure lurk otter ottoman oust yule

**0xd4 = 45;15 = N;E = 212 { bif gus hol isc ovu seq ves yup }** bifocals bifurcate gush gusset gust gusto hold hole holiday holland hollow holly holocaust hologram holy ischemia ovulate ovum sequence sequestrate sequin sequoia vesicle vespa vespers vessel vest vestal vestibule vestry yuppie

**0xd5 = 45;16 = N;F = 213 { bik dev dif ges ouz oys pic yur }** bike bikini develop deviant device devil devious devise devon devote devour difference difficulty diffract diffuse gestalt gestapo gestation gesture ouzo oyster oystercatcher picasso pick picket pickle pickup picnic pictorial picture yurt

**0xd6 = 45;23 = N;G = 214 { bim dum hag irk nic pae sec zai }** bimbo bimonthly dumb dummy dump dumplings hag haggard haggis haggle irk nicad nicaragua nice niche nichrome nick nickel nickname nicotine paediatrics paella second secret secretary sect section sector secular security zaire

**0xd7 = 45;24 = N;H = 215 { art bom bow dun kni ovi pam zam }** art artery arthritis artichoke article artillery artist artwork bomb bombast bow bowdlerise bowel bower bowie bowl bowler bowman bowtie dune dung dungeon dunk knickers knife knight knit ovid pamper pamphlet zambia

**0xd8 = 45;25 = N;I = 216 { bov ext hat opa osi sid sno vee }** bovine bovril extend extent exterior external extol extra extract extreme hat hatch hatchet hate opacity opal osiris side sidekick sideshow sidewalk snob snog snooker snooper snooze snort snot snout snow veer

**0xd9 = 45;26 = N;J = 217 { axe buc eme hac lar loo owe pew }** axe bucket buckle emerald emergency emeritus emery hack hacker hackle hacksaw larch lard larder large largesse lark larva larynx loo loofah look lookout loom loony loophole loose loot owe pew pewter

**0xda = 45;34 = N;K = 218 { awn buz dow est owl phe pum sir }** awning buzz buzzard dowdy dowel down downfall downhill download downtown dowry dowser establish estate esteem ester estimate estonia estrogen estuary owl pheasant phenomenon puma pumice pump pumpkin sir siren sirius sirloin

**0xdb = 45;35 = N;L = 219 { awl fer lun own pia sen sof ton }** awl fern ferret ferry fertile lunch lung own piano piazza senate send senior sense sensitive sensor sent sentence sentry sofa soften software softwood ton tone toner tongs tongue tonic tonight tonsil

**0xdc = 45;36 = N;M = 220 { awe bat caj ice oxa pid sod twi }** awe bat batch bath batman batter battery battle cajole cajun ice iceberg icebreaker icecream iceland oxalic piddle pidgin sod soda sodium sodomy twig twilight twin twine twinkle swirl twist twit twitch

**0xdd = 45;45 = N;N = 221 { aux cei lit oxb pel pip ren rub }** auxiliary ceilidh ceiling literature lithium lithuania litigate litre litter little oxbridge pelican pellet pelt pelvis pip pipe renaissance rename rend render renege renewal renovate renown rent rub rubber rubbish rubble ruby

**0xde = 45;46 = N;O = 222 { cem fat lav oxt piz scu sou vap }** cement cemetery fat fate father fatigue fatwa lava lavatory lavender lavish oxtail pizza pizzica scuba scud scull sculpture scum scupper scurvy souffle soul sound soup sour source sourdough south souvenir vapour

**0xdf = 45;56 = N;P = 223 { aur civ mic oxx pig ply snu suf }** aura civilian civilise mica mickey microbiology micron micronesia microphone microprocessor microscope microwave ox pig pigeon pigeonhole piggyback pigment ply plywood snub snuff snug snuggle suffer suffice suffix suffocate suffrage suffragette sufi

**0xe0 = 46;11/66 = O;A = 224 { abs aun coe far iod med nud ske }** abseil absence absinthe absolute absorb abstain abstinence abstract absurd aunt coefficient coexistence far farce fare farewell farm iodine medal meddle medical meditate mediterranean medium medline nude nudge skeleton sketch skew skewer

**0xe1 = 46;12 = O;B = 225 { auk cya hyp nem ozo see sni val }** auk cyan cyanide hype hyperlink hypertension hypnosis hypo hypocrite hypothesis nematode nemesis ozone see seed seep seer seesaw sniff snip sniper snitch vale valentine valet validate valium valley valour valuable valve

**0xe2 = 46;13 = O;C = 226 { cyc dom edi fan inm nes tur vea }** cycle cyclone domain dome domestic dominant dominican dominion domino edible edict edition editor fan fancy fang fanny fantasy inmate nest nestle turban turf turkey turmeric turn turnip turnstile turquoise turtle veal

**0xe3 = 46;14 = O;D = 227 { cyg fet gir inl nib ski sma vec }** cygnet cygnus feta fetch fete fetish fetter giraffe gird girder girdle girl giro girth inlet nib nibble ski skid skill skim skimp skin skip skirt skive smack small smart smash vector

**0xe4 = 46;15 = O;E = 228 { coo cym foo ivo nim sag sch uzi }** coo cook cool coop cooperate coordinator coot cymbal cymru food fool foot footage football footer foothill footnote footprint ivory nimble nimbus sag saga sage sago schedule scheme schizo scholar school uzi

**0xe5 = 46;16 = O;F = 229 { auc cin jac kic may nin onu soc }** auction cinch cinder cinema cinnamon jack jackal jackboot jackdaw jacket jackfruit jackhammer jackknife jackpot kick kickoff may mayan mayday mayflower mayhem mayonnaise mayor ninja ninth onus soccer social society sock socket

**0xe6 = 46;23 = O;G = 230 { cir eth fai law nod ony tea veh }** circle circuit circumstance circus ethanol ether ethernet ethics ethiopia ethnic ethylene fail faint fair fairy faith law lawn nod node onyx tea teach teak team teapot tears tease teasel teat vehicle

**0xe7 = 46;24 = O;H = 231 { aub cof fro jul nou ooh ped sam }** aubergine coffee coffer coffin cofounder frock frog frogman frolic frond front frost froth frown julian july nougat noun ooh pedal pedant pedestal pedestrian pedicure pedigree pedometer samba samoa samosa samovar sample

**0xe8 = 46;25 = O;I = 232 { boa cog gam key mcc now ooz van }** boa boar board boast boat cog cogitate cognac cognition gambia gambit gambler gambol game gamelan gamete gamma gammon key keyboard mccarthyism nowadays nowhere ooze van vandalism vane vanguard vanilla vanity vantage

**0xe9 = 46;26 = O;J = 233 { han jai joy len maz poc rou ult }** hand handbag handle handmaid handset hang hanker hanky hansom jail joy joystick length lens lent lentil maze pock pocket rouble rouge rough roulette round route routine ultimatum ultra ultramarine ultrasound ultraviolet

**0xea = 46;34 = O;K = 234 { atm ind joc ken nuc nul saf tal }** atmosphere independent index india indie indigo individual industry jock jockey jockstrap jocular jocularly kennel kenya nucleus null nullify safari safe safeguard saffron talc talcum tale talent taliban talk tall tally talon

**Oxeb = 46;35 = O;L = 235 { cab coh jad jew lik oat rad twe }** cab cabal cabaret cabbage cabernet cabin cabinet cable cabriolet cohabit coherence cohesion cohort jade jew jewel like oat oath radar radiate radical radio radish radius radon tweak tweed tweet twelve twenty

**Oxec = 46;36 = O;M = 236 { ath din fau kip kno nub obt slu }** athletics din dinar dine dinghy dingo dinner dinosaur faucet fault fauna faust kip kipper knob knock knoll knot know nub obtain obtuse sludge slug slum slump slurp slurry slush slut

**Oxed = 46;45 = O;N = 237 { bet coi hos izm kin lug odd vex }** bet beta betelgeuse betrayal better coiffure coil coin coitus hose hosiery hospital host hostage hostel hostile izmir kin kind kindergarten kinesiology kinetics king kingfisher kink kino lug luggage oddments odds vex

**Oxee = 46;46 = O;O = 238 { ata goo lol mut odo opu tha vic }** ataxia goo goodbye goodwill goof googol goon goose loll lolly mutate mute mutiny mutter mutton odometer odour opus thailand thank thatch thaw vicar vicarage vice viceroy vicinity vicious vicissitude victim victory

**Oxef = 46;56 = O;P = 239 { asy fam inv ivy jib oli que raz }** asylum fame familiar family famine invade invalid inventor invest invite invoice invoke ivy jib jibe oligarch olive queasy queen queer quell quench query quest question queue raze razor razorbill razzle razzmatazz

**Oxf0 = 56;11/66 = P;A = 240 { emp fle ion kam ons pub pyj uru }** empathy emperor emphasis empire employ emporium empower empress empty flea fleck flee fleece fleet flesh flex ion ionian ionic ionosphere kamasutra kamikaze onset onslaught pub puberty pubic public publican pyjama uruguay

**Oxf1 = 56;12 = P;B = 241 { azt ear esc iti jel ses syn tub }** aztec ear earl earn earnest earth earthenware earthquake earwig escape eschew escort escrow itinerary jello jelly sesame session synagogue sync syndicate syndrome synod synopsis syntax synthetic tub tuba tube tuber tuberculosis

**Oxf2 = 56;13 = P;C = 242 { azo bil dea hou ite loi sak shr }** azores bile bilge bill billion billow dead deadline deadlock deaf deal dean dear death hound hours house housewife item loin loiter sake saki shred shrew shrimp shrine shrink shroud shrub shrug

**Oxf3 = 56;14 = P;D = 243 { azi bis cel kel mid nua phy sap }** azimuth biscuit bisexual bishop bison bistro celebrity celery celibacy cell cellar cello cellulite celt kelp kelvin middle midge midget midi midnight midriff midwest midwife nuance physics physiology physiotherapy physique sap sapphire

**Oxf4 = 56;15 = P;E = 244 { aze bit cup ist lon pil sar sig }** azerbaijan bit bitch bite bitter bittern cup cupboard cupid cupola isthmus london loner pilates pilau pile pilgrim pill pillar pillow pilot sarcasm sarin sigh sight sigma sign signal signature significant signora

**Oxf5 = 56;16 = P;F = 245 { day lax leg orm saw sus urb wee }** day daycare daylight daytime laxative laxity leg legacy legal legend legion legislate legitimacy lego ormolu saw sawdust susceptible sushi suspect suspend suspicion suss sustain sustenance urban wee weed week weep weevil

**Oxf6 = 56;23 = P;G = 246 { cop eve jub ora orn sci sna urc }** cop cope copier copper copse copulate copy copyright eve event evergreen everlasting jubilation jubilee oracle oral orange orangutan orator ornament scientist scion snack snag snail snake snap snare snarl snatch urchin

**Oxf7 = 56;24 = P;H = 247 { ebu hub lie mel obs orp seg ter }** ebullience hub hubbub hubby hubris lie lieutenant meld melodrama melody melon melt obscenity obscure observatory obsess obstacle obstetrician obstinate obstruct orphan segment segregate terminal terms tern terrace terrain terrier territory terrorism

**Oxf8 = 56;25 = P;I = 248 { aza coa hal lul ort sei tai tow }** azalea coach coagulate coal coalition coast coaster coat coax halcyon half halitosis hall halloween halo halt halter lull lullaby orthopaedics seismic seize tail tailor taipan taiwan tow towel tower town townie

**Oxf9 = 56;26 = P;J = 249 { clu jig mot orw sep tak top urg }** club cluck clue clump clunk cluster clutch clutter jig jigsaw motel moth mother motif motion motivate motor motto orwell separate september take takeaway takeoff takeover top topaz topic topology topple urge

**Oxfa = 56;34 = P;K = 250 { buf exa iss jet mac sac tem uri }** buff buffalo buffer buffet buffoon exact exam examen example issue jet jetty mac macau mace macedonia mach machiavelli machine macro sack sacrifice temper temperature template temple tempo temporal temporary tempt urine

**Oxfb = 56;35 = P;L = 251 { chu cut ere kha not ord sev urn }** chuck chuckle chum chunk church churn chute chutney cut cutlery outlet cutoff erect khaki khartoum notary notch note notebook nothing notice notify notion ordeal order ordinance ordinary ordnance seven severe urn

**Oxfc = 56;36 = P;M = 252 { ask bum ety exe lid sew tar wre }** ask bum bumble bumblebee bump bumper etymology executive exempt exercise exert lid lido sew sewer tar tare target tariff tarmac tarn tarot tart wreak wreath wreck wren wrench wrest wrestler wretch

**Oxfd = 56;45 = P;N = 253 { eti jol mod off ree sex tax usa }** etiquette jolly jolt mode model modem moderator modern modesty modify module offal offence offer office officer official offset offspring reed reef reefer reek reel sex sexton ta tax taxi taxonomy usage

**Oxfe = 56;46 = P;O = 254 { dre ela ete haz lec loc tog use }** dread dreadlock dream dredge dregs drench dress drew elaborate elan elastic eternity hazard haze hazelnut lech lecture locate loch lock locket lockout locomotive locum locust tog toga togetherness toggle toga user

**Oxff = 56;56 = P;P = 255 { eff esq kne nip sme uni ush wig }** effects effeminate effervesce efficacy efficiency effigy effluent effort esq knead knee nip nipper nipple smear smell smelt unicorn uniform unify union unique unity university unix usher wig wigeon wiggle wight wigwam

## Appendix 1: Inverse Lookup - abbreviation to partition value in hex

aba=41 abb=12 abd=a7 abe=a8 abh=b2 abi=a8 abo=9f abr=b4 abs=e0 abu=a9 aby=ce aca=cd acc=68 ace=c5  
ach=aa aci=9c ack=8f acn=8e aco=ab acq=ac acr=49 act=88 acu=83 ada=80 add=cc adh=7f adi=7e adj=7d  
adm=cc ado=47 adr=ad adu=7a adv=c8 aeg=ae aer=af aet=a7 aff=8d afg=a6 afr=a0 aft=b0 aga=c9 age=ca  
agg=a6 agi=b2 agn=9a ago=b3 agr=b4 aid=96 aik=95 aim=94 air=19 ais=93 aja=92 akk=91 ala=cc alb=c7  
alc=b5 ald=23 ale=22 alg=17 ali=16 alk=21 all=a0 alm=b6 alp=b7 alt=c4 alu=1d ama=c3 amb=7f ame=9d  
ami=1c amm=b8 amn=b9 amo=ba amp=96 amu=16 ana=5f anc=cd and=9c ane=15 ang=36 ani=14 ank=13 ann=92  
ano=92 ans=12 ant=7e anu=11 anv=10 anx=0f aor=19 apa=63 ape=5c aph=93 apo=5b app=2f apr=94 aqu=61  
ara=37 arc=ae ard=36 are=95 arg=96 ari=97 arj=2f ark=2e arm=57 aro=2d arr=99 ars=98 art=d7 asb=2b  
asc=99 ash=28 asi=9a ask=fc asp=52 ass=61 ast=33 asy=ef ata=ee ath=ec atl=9b atm=ea ato=91 atr=9d  
att=8c aub=e7 auc=e5 aud=61 aug=29 auk=e1 aun=e0 aur=df aus=9e aut=ba aux=dd ava=2b ave=45 avi=2a  
avo=28 awa=29 awe=dc awl=db awn=da axe=d9 axi=9f axl=08 axo=07 aya=05 aza=f8 aze=f4 azi=f3 azo=f2  
azt=f1 azu=6d bab=ac bac=6f bad=93 baf=6c bag=24 bah=a7 bai=a0 bak=a1 bal=6c bam=22 ban=1e bap=a2  
bar=14 bas=64 bat=dc bau=23 bav=63 baw=a3 bay=a4 baz=a5 bea=41 beb=62 bec=b1 bed=20 bee=d1 bef=d1  
beg=8c beh=c4 bei=d2 bel=aa ben=1f beq=12 ber=b7 bes=26 bet=ed bev=d3 bew=aa bez=6e bha=0c bia=0b  
bib=a8 bic=73 bid=a7 bif=d4 big=a6 bih=6f bik=d5 bil=f2 bim=d6 bin=6c bio=55 bir=71 bis=f3 bit=f4  
biw=21 bix=20 biz=1f bla=42 ble=af bli=ac blo=60 blu=5b boa=e8 bob=a4 bod=6e boe=17 bof=16 bog=70  
boh=14 bol=a3 bom=d7 bon=af boo=7d bop=0f bor=b4 bos=6e bot=b6 bou=a2 bov=d8 bow=d7 box=11 boy=a2  
bra=1c bre=24 bri=12 bro=21 bru=cf bse=2f bub=39 buc=d9 bud=b9 buf=fa bug=96 bui=37 bul=bf bum=fc  
bun=b2 buo=36 bur=8b bus=c1 but=95 buy=12 buz=da bye=33 byl=31 byp=30 byt=24 byz=2e cab=eb cac=69  
cad=74 caf=d0 cag=2b caj=dc cak=29 cal=92 cam=b1 can=0f cap=4b car=06 cas=6d cat=2e cau=c6 cav=b0  
cay=9a cea=28 ced=26 cei=dd cel=f3 cem=de cen=65 cer=c8 cha=03 che=4a chi=1f chl=5f cho=58 chr=63  
chu=fb cia=5e cid=5d cig=5c cin=e5 cip=25 cir=e6 cit=cb civ=df cla=31 cle=64 cli=a6 clo=54 clu=f9  
coa=f8 cob=aa coc=75 cod=c6 coe=e0 cof=e7 cog=e8 coh=eb coi=ed cok=58 col=4f com=01 con=00 coo=e4  
cop=f6 coq=57 cor=2a cos=87 cot=a1 cou=28 cov=86 cow=85 cox=56 coy=54 cpu=53 cra=29 cre=47 cri=93  
cro=17 cru=4d cry=c0 cub=5f cuc=bf cud=be cue=50 cuf=4f cui=4e cul=bd cum=4c cun=bc cup=f4 cur=2d  
cus=d3 cut=fb cya=e1 cyb=55 cyc=e2 cyg=e3 cyl=71 cym=e4 cyn=6e cyp=c6 cyr=6c cys=bc cyt=bd cze=69  
dab=67 dad=be dag=bf dah=64 dai=ac dal=c0 dam=c9 dan=54 dar=53 das=3d dat=ac dau=b6 daw=c1 day=f5  
daz=c2 dea=f2 deb=8a dec=1b ded=b5 dee=3b def=38 deg=b4 deh=2d dei=c3 dej=2b del=9e dem=cb den=cd  
deo=2a dep=53 der=3d des=d3 det=b7 dev=d5 dew=28 dex=c4 dha=26 dia=5c dic=b3 did=c5 die=b2 dif=d5  
dig=b4 dik=24 dil=b1 dim=b0 din=ec dio=af dip=3e dir=3f dis=0d dit=ae div=be dix=22 diz=21 dji=20  
dob=1f doc=b8 dod=b9 doe=1e dog=bb doj=1c dol=bc dom=e2 don=46 doo=39 dop=37 dor=1a dos=36 dot=c7  
dou=be dov=48 dow=da doz=c8 dra=3d dre=fe dri=c2 dro=88 dru=bf dry=c9 dub=45 duc=35 dud=34 due=ca  
duf=cb dug=43 duk=42 dul=41 dum=d6 dun=d7 duo=33 dup=32 dur=cc dus=cd dut=ce duv=31 dvo=3c dwa=3b  
dwe=39 dwi=38 dye=37 dyi=35 dyk=34 dyn=2f dys=9c eag=cf ear=f1 eas=2e eat=45 eav=87 ebb=43 ebo=19  
ebu=f7 ecc=41 ech=59 ecl=1a eco=16 ecs=3f ecu=3e ecz=3d edd=30 ede=1b edg=3a edi=e2 edu=39 eel=38  
eff=ff egg=37 ego=36 egr=35 egy=34 eid=33 eif=31 eig=3c eja=5f eje=5e ela=fe elb=5b eld=5a ele=8e  
elf=59 eli=c2 elk=58 elm=57 elo=56 elu=55 ema=53 emb=84 eme=d9 emi=51 emm=50 emo=4c emp=f0 emu=1c  
ena=1d enc=7b end=4b ene=1e enf=49 eng=5c enh=17 eni=16 enj=15 enl=14 enq=13 enr=12 ens=11 ent=6d  
env=45 enz=10 eph=44 epi=79 epo=45 epr=0d equ=5d era=42 ere=fb erg=0b ero=46 err=47 ers=08 eru=07  
esc=f1 esk=06 esp=18 esq=ff ess=38 est=da etc=49 ete=fe eth=e6 eti=fd ety=fc euc=3b euk=2f eup=2e  
eur=4a eut=2c eva=65 eve=f6 evi=43 evo=4b ewe=2a exa=fa exc=93 exe=fc exh=3e exi=3f exp=62 ext=d8  
exu=4c eye=75 eyr=28 ezi=27 fab=3d fac=80 fad=4d fae=25 fag=4e fah=23 fai=e6 fak=4f fal=1b fam=ef  
fan=e2 far=e0 fas=78 fat=de fau=ec fav=50 faw=1f fax=1e faz=1d fea=a4 feb=19 fed=51 fee=49 fei=a5  
fel=9e fem=6e fen=3d fer=db fes=9d fet=e3 feu=64 fev=65 few=97 fez=96 fia=0e fib=4c fic=66 fid=8f  
fie=0d fif=92 fig=88 fij=91 fil=b8 fin=ad fir=73 fis=82 fit=9c fiv=bd fix=bc fiz=67 fjo=bb fla=0e  
fle=f0 fli=52 flo=23 flu=22 fly=76 foa=68 fob=b9 foc=b8 foe=69 fog=6a foi=70 fol=a1 fom=b5 fon=6f  
foo=e4 fop=b3 for=08 fos=6b fou=7c fow=b1 fox=6c foy=b0 fra=71 fre=3f fri=26 fro=e7 fru=78 fry=af  
fuc=ae fud=ac fue=ab fug=6c fuj=77 ful=76 fum=6d fun=b4 fur=3f fus=7e fut=63 fuz=71 gab=ce gad=6a  
gae=70 gaf=6e gag=69 gai=ca gal=a1 gam=e8 gan=81 gao=6d gap=6f gar=a8 gas=70 gat=c5 gau=68 gav=70  
gaw=6a gay=69 gaz=9c gea=68 gec=67 gee=71 gei=72 gel=73 gem=74 gen=56 geo=84 ger=58 ges=d5 get=63



gey=62 gha=61 ghe=56 gho=8f gia=8e gib=62 gif=8d gig=86 gil=0b gim=8a gin=89 gir=e3 gis=89 git=85  
 giv=78 giz=53 gla=91 gle=0c gli=ab glo=c8 glu=40 gly=a3 gna=51 gno=82 gnu=81 goa=a1 gob=5c god=50  
 gog=80 gol=1c gon=0d goo=ee gop=7e gor=8d gos=4e got=7d gou=4d gov=0e gow=7a goy=80 gra=0c gre=9f  
 gri=37 gro=27 gru=ca gry=7f gua=99 gub=7e gue=83 guf=7d gui=d3 guj=7c gul=2f gum=4a gun=7b gup=79  
 gur=6c gus=d4 gut=48 guy=7d guz=76 gyb=75 gym=7e gyn=72 gyp=47 gyr=7f hab=1e hac=d9 had=70 hag=d6  
 hai=1d hak=6f hal=f8 ham=a7 han=e9 hap=80 har=59 has=2e hat=d8 hau=81 hav=80 haw=82 hax=99 hay=98  
 haz=fe hea=1a heb=97 hec=83 hed=84 hee=85 hef=93 hei=8e hel=d2 hem=91 hen=86 hep=91 her=6e hes=84  
 het=8f hew=8e hex=7c hib=88 hic=89 hid=8b hie=8a hig=7f hij=8a hik=88 hil=8b hin=bd hip=a3 hir=85  
 his=85 hit=75 hiv=52 hix=50 hoa=8c hob=a8 hoc=4e hod=4c hoe=4a hog=91 hoi=49 hol=d4 hom=97 hon=d0  
 hoo=cf hop=8d hor=cb hos=ed hot=31 hou=f2 hov=8e how=8f hub=f7 hue=44 huf=41 hug=40 hul=90 hum=cc  
 hun=56 hur=13 hus=43 hut=5d hyb=3d hyd=82 hye=4f hyg=6b hym=53 hyp=e1 hys=54 ibi=67 ica=66 ice=dc  
 ici=65 ico=55 ide=89 idi=8a idl=62 ido=61 igl=5f ign=8c igu=5e ile=5d ilk=5c ill=90 ima=56 imb=5b  
 imi=5a imm=44 imp=1d inc=81 ind=ea inf=72 ing=57 inh=58 ini=57 inj=55 ink=90 inl=e3 inm=e2 inn=58  
 inp=59 inq=37 ins=74 int=3a inv=ef iod=e0 ion=f0 ipo=cc ira=5a iri=81 irk=d6 iro=83 irr=c7 isc=d4  
 isl=82 iso=5b isr=cf iss=fa ist=f4 ita=5c ite=f2 iti=f1 ivo=e4 ivy=ef izm=ed jab=52 jac=e5 jad=eb  
 jag=5e jai=e9 jak=b3 jal=ae jam=94 jan=5f jap=75 jar=76 jas=77 jau=78 jav=79 jaw=c4 jay=7a jaz=c2  
 jea=b4 jed=bd jee=7b jeh=42 jel=f1 jem=c8 jeo=ac jer=9a jes=88 jet=fa jew=eb jib=ef jif=59 jig=f9  
 jih=64 jil=68 jin=2d jit=69 jiv=3e job=3c joc=ea jod=4f jog=89 joi=32 jok=8d jol=fd jon=92 jor=c8  
 jos=30 jot=9b jou=4a jov=6d jow=77 joy=e9 jub=f6 jud=ae jug=4d jui=7f juj=8b juk=64 jul=e7 jum=4f  
 jun=97 jup=66 jur=6b jus=60 jut=73 juv=aa jux=b2 kaf=b6 kai=b7 kak=ba kal=1d kam=f0 kan=93 kar=87  
 kas=98 kay=9a kaz=a2 keb=20 kee=94 keg=18 kel=f3 ken=ea ker=77 ket=72 key=e8 kha=fb kib=44 kic=e5  
 kid=7b kil=51 kim=3f kin=ed kio=40 kip=ec kir=44 kis=47 kit=79 kiw=25 kla=1d kle=19 klu=27 kna=8b  
 kne=ff kni=d7 kno=ec knu=30 koa=62 kor=6b kos=65 kre=6a kri=61 kry=72 kud=77 kum=4b kur=59 kuw=5a  
 kwa=60 lab=3b lac=81 lad=95 lag=40 lah=6d lai=79 lak=2a lam=94 lan=b0 lao=2c lap=39 lar=d9 las=3e  
 lat=a5 lau=46 lav=de law=e6 lax=f5 lay=c1 laz=10 lea=6a leb=73 lec=fe led=40 lee=af lef=b9 leg=f5  
 lei=13 lem=bb len=e9 leo=18 lep=97 les=a0 let=6c leu=43 lev=b7 lew=60 lex=67 lia=ab lib=61 lic=20  
 lid=fc lie=f7 lif=25 lig=a5 lik=eb lil=27 lim=cd lin=7c lio=30 lip=26 liq=60 lir=25 lis=1f lit=dd  
 liv=9b liz=33 loa=95 lob=51 loc=fe lod=5d lof=3b log=66 loi=f2 lol=ee lon=f4 loo=d9 lop=17 lor=c8  
 los=18 lot=1e lou=76 lov=0d low=c2 lox=1f loy=99 loz=90 lub=9f luc=84 lud=0a luf=c1 lug=ed lul=f8  
 lum=50 lun=db lup=78 lur=d3 lus=45 lut=d1 lux=d2 lyc=4c lye=89 lyi=7c lym=79 lyn=7c lyr=7e lys=9e  
 mac=fa mad=ce mae=98 maf=24 mag=51 mah=1e mai=9a maj=c9 mak=84 mal=82 mam=7e man=50 map=89 mar=32  
 mas=ae mat=c4 mau=2c mav=2a max=27 may=e5 maz=e9 mcc=e8 mea=84 mec=0a med=e0 mee=7a mef=66 meg=3a  
 mel=f7 mem=71 men=69 meo=14 mer=58 mes=ad met=c5 mex=23 mez=22 mic=df mid=f3 mif=38 mig=2d mil=d0  
 mim=5a min=44 mir=5a mis=b5 mit=76 mix=7f moa=80 mob=82 moc=70 mod=fd mog=6b moh=71 moi=66 mol=79  
 mom=57 mon=70 moo=97 mop=2c mor=8e mos=78 mot=f9 mou=b0 mov=46 mow=46 moz=75 muc=85 mud=87 muf=b2  
 mug=88 muj=32 mul=68 mum=62 mun=40 mur=3b mus=98 mut=ee muz=4a mya=0f myc=0e mye=0a myl=09 myo=05  
 myr=38 mys=2d myt=2b naa=29 nab=26 nad=44 nag=21 nai=81 nak=a6 nam=83 nan=86 nap=55 nar=8e nas=35  
 nat=c2 nau=7d nav=4e nay=77 naz=7b nea=74 neb=2f nec=be nee=28 neg=c0 nei=65 nem=e1 neo=ba nep=b7  
 ner=83 nes=e2 net=4b neu=a9 new=a6 nex=73 nia=71 nib=e3 nic=d6 nie=9a nig=8d nih=95 nil=94 nim=e4  
 nin=e5 nip=ff nir=8c nit=36 noa=86 nob=48 nod=e6 noe=47 nog=46 noi=3f nom=34 non=33 noo=34 nor=35  
 nos=14 not=fb nou=e7 nov=38 now=e8 noz=d0 nua=f3 nub=ec nuc=ea nud=e0 nug=9c nui=9e nuk=ca nul=ea  
 num=6b nun=c3 nur=bc nut=8f nuz=b5 nyl=b6 nym=b7 oaf=b8 oak=b9 oar=ba oas=bb oat=eb obe=92 obi=be  
 obj=bf obl=93 obo=c1 obs=f7 obt=ec occ=a9 oce=c5 och=c6 oct=a6 ocu=c7 odd=ed odi=c9 odo=ee ody=cb  
 oed=a8 oes=9d off=fd ogl=9f ogr=a0 ohm=a1 oil=a2 oin=a3 oki=a4 okt=a5 old=a6 ole=a7 oli=ef oly=a9  
 oma=aa omb=ab ome=22 omi=ad omn=76 ona=af onc=b0 oni=b1 onl=b2 ons=f0 ont=c0 onu=e5 ony=e6 ooh=e7  
 ooz=e8 opa=d8 ope=79 opi=d0 opp=7a opt=6b opu=ee ora=f6 orb=d1 orc=6d ord=fb org=7e ori=7f orm=f5  
 orn=f6 orp=f7 ort=f8 orw=f9 osc=80 osi=d8 osm=cd osp=ce ost=d2 ott=d3 oui=d1 oun=d2 ous=d3 out=13  
 ouz=d5 ova=84 ove=4c ovi=d7 ovu=d4 owe=d9 owl=da own=db oxa=dc oxb=dd oxt=de oxx=df oxy=7d oys=d5  
 ozo=e1 pac=b5 pad=ad pae=d6 pag=57 pai=3a pak=56 pal=bf pam=d7 pan=5e pap=94 par=09 pas=85 pat=6b  
 pau=90 pav=85 paw=8b pax=54 pay=9b pea=87 peb=63 pec=86 ped=e7 pee=ba peg=cf pel=dd pen=9d peo=6a  
 pep=4b per=2b pes=60 pet=89 pew=d9 pha=4a phe=da phi=42 phl=43 pho=bc phr=45 phy=f3 pia=db pic=d5  
 pid=dc pie=5a pif=4b pig=df pik=4d pil=f4 pim=2e pin=c6 pio=51 pip=dd piq=53 pir=60 pis=8d pit=bb  
 piv=87 pix=7c piz=de pla=11 ple=c4 plo=aa plu=73 ply=df poc=e9 pod=75 poe=20 poi=95 pok=21 pol=34  
 pom=22 pon=37 poo=9f pop=ad por=3e pos=b8 pot=b1 pou=9d pov=78 pow=2a pox=6e pra=ce pre=0a pri=10  
 pro=02 pru=2d pse=74 psy=48 pub=f0 puc=23 pud=24 puf=49 pug=25 puk=7a pul=a2 pum=da pun=ce pup=4b  
 pur=d1 pus=90 put=81 puz=82 pyg=83 pyj=f0 pyl=79 pyr=4c pyt=7b qat=7c qua=05 que=ef qui=25 quo=9e  
 rab=8c rac=44 rad=eb raf=52 rag=54 rai=88 raj=86 rak=87 ral=88 ram=8a ran=8b rap=87 rar=8c ras=55  
 rat=63 rav=67 raw=6c ray=26 raz=ef rea=7a reb=b5 rec=4e red=c0 ree=fd ref=46 reg=8f reh=30 rei=72  
 rej=c3 rel=45 rem=ca ren=dd reo=6f rep=3b req=cf rer=72 res=18 ret=bc reu=75 rev=20 rew=7d rex=84  
 rha=a9 rhe=7c rhi=59 rho=7b rhu=ad rhy=27 rib=1f ric=a8 rid=77 rif=6d rig=6e rim=a8 rin=31 rio=29  
 rip=2a ris=67 rit=73 riv=74 roa=7a rob=41 roc=2b rod=0c roe=be rog=2c rol=60 rom=83 roo=48 rop=94  
 roq=95 ros=18 rot=92 rou=e9 rov=99 row=19 roy=9b roz=90 rub=dd ruc=9e rud=9f rue=a0 ruf=a1 rug=61  
 rui=a3 rul=a4 rum=4d run=a2 rup=a7 rur=54 rus=3a rut=1a rwa=1b rye=1c sab=62 sac=fa sad=1a saf=ea  
 sag=e4 sah=22 sai=17 sak=f2 sal=bd sam=e7 san=42 sap=f3 sar=f4 sas=41 sat=c9 sau=4f sav=b1 saw=f5

sax=3c say=0c sca=5a sce=39 sch=e4 sci=f6 sco=7b scr=30 scu=de sea=48 sec=d6 sed=3a see=e1 seg=f7  
sei=f8 sel=5b sem=6a sen=db sep=f9 seq=d4 ser=cc ses=f1 set=47 sev=fb sew=fc sex=fd sey=24 sha=2c  
she=66 shi=b3 sho=63 shr=f2 shu=bd shy=4d sib=4e sic=4f sid=d8 sie=5d sif=52 sig=f4 sik=48 sil=ab  
sim=3c sin=91 sip=0f sir=da sis=5e sit=5f siv=5c six=5d siz=10 ske=e0 ski=e3 sku=11 sky=32 sla=78  
sle=b6 sli=9a slo=c3 slu=ec sma=e3 sme=ff smi=13 smo=42 smu=14 sna=f6 sne=15 sni=e1 sno=d8 snu=df  
soa=12 sob=c7 soc=e5 sod=dc sof=db soh=46 soi=47 soj=b4 sol=57 som=33 son=30 soo=9d sop=36 sor=31  
sou=de sov=9e sow=3a soy=9f spa=43 spe=65 sph=3e spi=c7 spl=a0 spo=67 spr=69 spu=a5 spy=a0 squ=35  
sta=04 ste=36 sti=90 sto=49 str=0b stu=40 sty=a1 sua=1b sub=15 suc=4f sud=a2 sue=43 suf=df sug=a3  
sui=b6 sul=23 sum=80 sun=b3 sup=a3 sur=86 sus=f5 suz=29 swa=d2 swe=b3 swi=89 swo=3c syd=2e syl=2f  
sym=5d syn=f1 syp=a4 syr=b3 sys=63 tab=9b tac=ab tad=9c taf=a6 tag=68 tah=a7 tai=f8 tak=f9 tal=ea  
tam=5b tan=76 tao=6f tap=50 tar=fc tas=ba tat=73 tau=74 tav=75 taw=76 tax=fd tea=e6 tec=4a ted=a8  
tee=d2 tef=4d tel=d1 tem=fa ten=c5 tep=51 teq=52 ter=f7 tes=d0 tet=49 tex=c1 tha=ee the=96 thi=a9  
tho=4e thr=33 thu=68 thy=a9 tib=aa tic=64 tid=66 tie=ab tif=34 tig=98 tik=27 til=99 tim=67 tin=bb  
tip=9b tir=9c tis=2d tit=32 toa=6a tob=9d tod=9e toe=32 tof=9f tog=fe toi=ac tok=35 tol=93 tom=72  
ton=db too=8b top=f9 tor=7f tos=8c tot=6f tou=6f tov=13 tow=f8 tox=15 toy=8d tra=07 tre=9c tri=19  
tro=3c tru=77 try=a5 tsu=0e tub=f1 tuc=70 tud=91 tue=72 tuf=8e tug=74 tui=08 tul=09 tum=a9 tun=66  
tup=0d tur=e2 tux=0f tut=8f tuv=10 tux=11 tva=90 tve=eb twi=dc two=15 tyc=16 tyi=17 typ=8a tyr=21  
ubi=3b udd=3c ufo=3d uga=3e ugl=3f ukr=40 uku=41 ulc=42 ult=e9 umb=91 ump=61 unc=21 und=c3 une=64  
unf=65 uni=ff unl=92 unw=8a unz=68 upb=69 upd=6a upg=6b uph=94 upl=23 upp=31 upr=24 ups=25 upt=95  
ura=96 urb=f5 urc=f6 urd=5b ure=97 urg=f9 uri=fa urn=fb uru=f0 usa=fd use=fe ush=ff usu=98 uta=06  
ute=99 uti=9a utm=09 uto=9b utt=0b uvx=0c uzi=e4 vac=a4 vag=28 val=e1 vam=27 van=e8 vap=de var=a0  
vas=2c vat=a5 vau=bf vea=e2 vec=e3 vee=d8 veg=c0 veh=e6 vei=c1 vel=52 ven=99 ver=5f ves=d4 vet=53  
vex=ed via=54 vib=2b vic=ee vid=26 vie=c2 vig=55 vik=29 vil=2c vin=5e vio=56 vip=c3 vir=98 vis=bb  
vit=58 viv=59 vix=32 voc=60 vod=34 vog=35 voi=c4 vol=b2 vom=38 voo=39 vor=3a vot=c5 vou=62 vow=c6  
vox=0e voy=be vul=64 wad=65 waf=c8 wag=5e wai=96 wak=c9 wal=b9 wan=98 war=39 was=15 wat=a4 wav=ca  
wax=1a way=1b wea=a7 web=cb wed=c5 wee=f5 wef=20 wei=c6 wel=7d wen=cc wes=cd wet=ce wha=18 whe=c0  
whi=16 who=7a wic=1a wid=1b wie=97 wif=b6 wig=ff wil=1c wim=9b win=83 wip=9d wir=ae wis=c7 wit=77  
wiz=a1 woa=a2 wob=a3 woe=a4 wok=a5 wol=af wom=cb won=b0 woo=cd wor=c1 wou=7b wow=b1 wra=74 wre=fc  
wri=8f wro=b2 wus=81 wyv=82 xen=b3 xer=78 xia=85 xma=86 xyl=87 yac=b4 yah=b5 yak=8a yal=8b yam=8c  
yan=ad yap=8d yar=cf yaw=b7 yea=d0 yel=d1 yem=c2 yen=c3 yeo=c4 yes=b8 yet=c6 yew=c7 yid=c8 yie=c9  
yin=ca yob=cb yod=c0 yog=b9 yok=ba yol=cf yor=d0 you=bb yug=d2 yul=d3 yup=d4 yur=d5 zai=d6 zam=d7  
zan=0f zap=a9 zea=aa zeb=ab zen=10 zeo=ac zep=ad zer=ae zes=af zeu=b0 zig=b1 zil=bc zim=b3 zin=bd  
zio=b5 zip=b6 zir=b7 zit=b8 zod=b9 zom=ba zon=bb zoo=11 zor=bc zuc=bd zul=be zyg=bf