SeedPicker Solitaire

v1.0.2

SeedPicker Solitaire is a simple game for generating Bitcoin seed phrases offline using an ordinary deck of playing cards and a printed lookup table.

For technical details, see: https://github.com/jimbojw/seed-picker-solitaire#readme

Objective & Setup

The object of the game is to produce a random ordering of cards which yields the first 23 words of a Bitcoin seed phrase. You'll need:

- An ordinary deck of playing cards.
- These instructions and the SeedPicker Solitaire lookup table, printed.

Lastly, find a quiet space without any cameras or listening devices.

Procedure Part I - Ordering the Cards

Follow this procedure to produce a random ordering of cards. This ordering will be mapped to seed words in Part II.

- 1. Shuffle the deck thoroughly.
- 2. Deal cards one at a time, face up, from the top of the deck in a line.
- 3. As soon as you have two cards in a row with DIFFERENT suits, this is called an *unsuited tuple*. Remove both cards and place them face up on the discard pile.
- 4. Continue dealing single cards and removing unsuited tuples until no cards remain in the deck.
- 5. When the deck is empty and all unsuited tuples have been discarded, take any remaining cards and place them face up on the discard pile.
- 6. Now all cards are in the discard pile. Turn the discard pile over, the game is done.

The deck now contains at least 23 consecutive unsuited tuples. Each tuple maps to one Bitcoin seed word.

Procedure Part II - Mapping Tuples to Words

Use the following procedure to convert each tuple into a seed word:

- 1. Deal one card from the deck face up.
- 2. Turn to the page in lookup table that has that card in the left-most (big) column.
- 3. Deal a second card from the deck face up.
- 4. Find the second card in the entries to the right.
- 5. Record the seed word.

For example, say the first card was the 4 of spades. You'll find this on the first page of the lookup table. Now say the second card is the 7 of diamonds. In the table, you'll find that this yields the word 'bacon'.

Repeat the above steps until you've recorded your 23 seed words. You're done!

NOTE: Producing the 24th word of a 24-word Bitcoin seed phrase is not doable offline because it contains a checksum. For that you'll need special software or a Bitcoin wallet.

	A 	A♥	ability	A♦	achieve	A .	address
	2.		able		acid		adjust
	3♠		about		acoustic		admit
	4 ♠		about				adult
					acquire		
\mathbf{A}	5♠		absent		across		advance
1	6♠		absorb		act		advice
	7♠		abstract		action		aerobic
	8♠	8♥	absurd	8♦	actor		affair
	9♠	9♥	abuse	9♦	actress	9 ♣	afford
	10♠	10♥	access	10 ♦	actual	10♣	afraid
	J ∳	J♥	accident	J♦	adapt	J♣	again
	Q .	Q♥	account	Q◆	add	_	age
	K∳ abandon		accuse		addict		agent
	A 	Λ •••	ahaad	Λ.	almact		
			ahead		almost		anchor
	2♠		aim		alone	_	ancient
	3♠		air		alpha		anger
Ω	4♠		airport		already		angle
	5♠		aisle		also		angry
	6♠		alarm		alter		animal
A	7♠		album	7♦	always		ankle
	8♠	8♥	alcohol	8♦	amateur	8♣	announce
$\overline{\mathbf{x}}$	9♠	9♥	alert	9♦	amazing	9♣	annual
	10♠	10♥	alien	10 ♦	among	10♣	another
	J ∳	J♥	all	J♦	amount	J♣	answer
	Q 4	Q♥	alley	Q◆	amused	Q♣	antenna
	K ≜ agree	K♥	allow	K∳	analyst	K̃♣	antique
	^ ^	Λ •••	onviotv		-		
	A♠		anxiety		arm		ask
	2.		any		armed		aspect
	3♠		apart		armor		assault
Ω	4♠		apology		army _.		asset
~	5♠	5♥	appear	5♦	around	5♣	assist
3	6♠	6♥	apple	6♦	arrange	6♣	assume
A	7♠	7♥	approve	7♦	arrest	7♣	asthma
	8♠	8♥	april	8♦	arrive	8♣	athlete
	9♠	9♥	arch	9♦	arrow	9♣	atom
	10♠	10♥	arctic	10 ♦	art	10♣	attack
	J ∳	J♥	area	J♦	artefact	J♣	attend
	Q .	Q♥	arena	Q◆	artist	Q♣	attitude
	K∳	Ř♥	argue		artwork	_	attract
	Λ.			Λ.	01.10.0000	Λ.	hanana
	A♠		auction		awesome		banana
	24		audit		awful		banner
	3♠		august		awkward		bar
	4♠		aunt		axis		barely
/ 1	5♠		author		baby		bargain
	6♠		auto		bachelor		barrel
	7♠		autumn		bacon		base
	8♠	8♥	average	8♦	badge	8 ♣	basic
T	9♠		avocado		bag		basket
	10♠	10♥	avoid	10 ♦	balance	10♣	battle
	J ∳	J♥	awake	J♦	balcony	J♣	beach
	Q •	Q♥	aware	Q◆	ball	Q♣	bean
	K ♠	K♥	away	K♦	bamboo	K♣	beauty
	A 	Λ 🕶	because	Λ.	hotray	٨.	blade
					betray		
	2♠		become		better		blame
	3♠		beef		between		blanket
	4		before		beyond		blast
5	5.		begin		bicycle		bleak
U	6♠		behave		bid		bless
	7♠		behind		bike		blind
	8.		believe		bind		blood
T	9.		below		biology		blossom
	10 ♠		belt		bird		blouse
	J♠		bench		birth		blue
	Q .		benefit		bitter		blur
	K ♠	K♥	best	K∳	black	K♣	blush

	A ♠	A♥ board	A♦ bottom	A ♣ brief
	2♠	2♥ boat	2♦ bounce	2 ♣ bright
	3♠	3♥ body	3♦ box	3 ♣ bring
	4.	4♥ boil	4 ♦ boy	4 ♣ brisk
6	5♠	5♥ bomb	5♦ bracket	5 ♣ broccoli
V	6♠	6♥ bone	6♦ brain	6 ♣ broken
<u> </u>	7♠	7♥ bonus	7 ♦ brand	7 ♣ bronze
	8	8♥ book	8♦ brass	8 ♣ broom
	9.	9♥ boost	9♦ brave	9 ♣ brother
	10 •	10♥ border	10♦ bread	10♣ brown
	 J♠	J♥ boring	J♦ breeze	J ≜ brush
	Q 4	O♥ borrow	O♦ brick	Q . bubble
	K∳	K♥ boss	K♦ bridge	K ≜ buddy
				-
	A	A♥ budget	A♦ busy	A ≗ camp
	2♠	2♥ buffalo	2♦ butter	2 ♣ can
	3♠	3♥ build	3♦ buyer	3 ≗ canal
	4♠	4♥ bulb	4♦ buzz	4 ♣ cancel
' /	5♠	5♥ bulk	5♦ cabbage	5 ♣ candy
	6♠	<mark>6♥</mark> bullet	<mark>6♦</mark> cabin	6 ♣ cannon
A	7♠	7♥ bundle	7 ♦ cable	7 ≗ canoe
	8🛊	8♥ bunker	8♦ cactus	8 ♣ canvas
	9.	9♥ burden	9♦ cage	9 ♣ canyon
	10 •	10♥ burger	10♦ cake	10 ♣ capable
	J ♠	J♥ burst	J♦ call	J ≗ capital
	Q 4	0 ♥ bus	Q ♦ calm	Q ≜ captain
	K ∳	K♥ business	K♦ camera	K ≜ car
				_
	A ♠	A♥ carbon	A♦ catch	A ≗ certain
	2♠	2♥ card	2♦ category	2 ≜ chair
	3♠	3♥ cargo	3♦ cattle	3 ♣ chalk
	4♠	4♥ carpet	4♦ caught	4 ♣ champion
8	5♠	5♥ carry	5♦ cause	5 ♣ change
U	6♠	<mark>6♥</mark> cart	6♦ caution	6 ♣ chaos
A	7♠	7♥ case	7 ♦ cave	7 ♣ chapter
	8🛊	8♥ cash	8♦ ceiling	8 ♣ charge
	9🛊	9♥ casino	9♦ celery	9 ♣ chase
_	10 🛊	10♥ castle	10♦ cement	10 ♣ chat
	J ∳	J♥ casual	J♦ census	J ♣ cheap
	Q •	0 ♥ cat	Q ♦ century	Q ⊕ check
	K•	K♥ catalog	K• cereal ์	K• cheese
	Λ.	•	_	
	A ♠	A♥ chef	A♦ cigar	A♣ clever
	2♠	2♥ cherry	2♦ cinnamon	2♣ click
	3♠	3♥ chest	3♦ circle	3♣ client
	4♠	4♥ chicken	4 ♦ citizen	4♣ cliff
9	5♠	5♥ chief	5♦ city	5 ♣ climb
U	6♠	6♥ child	6♦ civil	6 ♣ clinic
	7♠	7♥ chimney	7♦ claim	7 ♣ clip
	8.	8♥ choice	8♦ clap	8 ≗ clock
	94	9♥ choose	<pre>9 ◆ clarify</pre>	9 ≜ clog
	10♠	10♥ chronic	10 ♦ claw	10 . close
	J♠	J♥ chuckle	J♦ clay	J ≜ cloth
	Q ♠	Q ♥ chunk	Q ♦ clean	Q ≛ cloud
	K ♠	K ♥ churn	K ♦ clerk	K ♣ clown
	A 	A♥ club	A♦ column	A ♣ control
	2•	2♥ clump	2♦ combine	2♣ convince
	3♠	3♥ cluster	3♦ come	3♣ cook
	4 ♠		_	_
10		4♥ clutch	4♦ comfort	4♣ cool
10	5 ♠	5♥ coach	5♦ comic	5♣ copper
10	6♠	6♥ coast	6♦ common	6♣ copy
	7♠	7♥ coconut	7♦ company	7♣ coral
	84	8♥ code	8♦ concert	8♣ core
T	9.	9♥ coffee	9♦ conduct	9♣ corn
	10	10♥ coil	10 ♦ confirm	10♣ correct
	J ♠	J♥ coin	J♦ congress	J ≜ cost
	Q .	Q ♥ collect	Q ♦ connect	Q ≜ cotton
	K ♠	K ♥ color	K ♦ consider	K ≗ couch

_				_		_	
	•		country		crawl		crowd _
24	•	2♥	couple	2♦	crazy		crucial
34	•		course	3♦	cream	3♣	cruel
■ 44	•	4♥	cousin	4♦	credit	4♣	cruise
5	•	5♥	cover	5♦	creek	5♣	crumble
6	•	6♥	coyote	6♦	crew	6♣	crunch
▲ 7•	•	7♥	crack	7♦	cricket	7♣	crush
89	•	8♥	cradle	8♦	crime	8♣	cry
94	•	9♥	craft	9♦	crisp	9♣	crystal
10	•	10♥	cram	10 ♦	critic	10♣	cube
J	•	J♥	crane	J♦	crop	J♣	culture
Q	•	Q♥	crash	Q+	cross	Q♣	cup
Ke	•	K♥	crater	K♦	crouch	K♣	cupboard
A	•	A♥	curious	A♦	daring	A♣	decrease
2	•	2♥	current	2♦	dash	2♣	deer
34	•	3♥	curtain	3♦	daughter	3♣	defense
4	•	4♥	curve		dawn	4♣	define
54	•	5♥	cushion	5♦	day	5♣	defy
6	•	6♥	custom	6♦	deal		degree
7	•	7♥	cute	7♦	debate	7♣	delay
8	•	8♥	cycle	8♦	debris	8♣	deliver
9	•	9♥	dad	9♦	decade	9♣	demand
10	•	10♥	damage	10 ♦	december	10♣	demise
Je	•	J♥	damp	J♦	decide	J♣	denial
Qe	•	Q♥	dance	Q◆	decline	Q♣	dentist
Ke	•	K♥	danger	K♦	decorate	K♣	deny
A	≜ depart	A♥	deposit	A♦	device	A♣	dinner
29	depend	2♥	depth	2♦	devote	2♣	dinosaur
39	<u> </u>	3♥	deputy	3♦	diagram	3♣	direct
■ 7 49	•	4♥	derive	4♦	dial	4♣	dirt
K 56	•	5♥	describe	5♦	diamond	5♣	disagree
6	•	6♥	desert	6♦	diary	6♣	discover
▲ 79	•	7♥	design	7♦	dice	7♣	disease
84	•	8♥	desk	8♦	diesel	8♣	dish
9	•	9♥	despair	9♦	diet	9♣	dismiss
10	•		destroy	10♦	differ	10♣	disorder
J	•		detail	J♦	digital	J♣	display
04	•	Q♥	detect		dignity		distance
•	•	-	develop		diľemmá		divert

A	A♠ divide 2♠ divorce 3♠ dizzy 4♠ doctor 5♠ document 6♠ dog	Av 2v 3v 5v 6v	A→ double 2→ dove 3→ draft 4→ dragon 5→ drama 6→ drastic	A drive 2 drop 3 drum 4 dry 5 duck 6 dumb
	7♠ doll 8♠ dolphin 9♠ domain 10♠ donate J♠ donkey Q♠ donor K♠ door	7♥ 8♥ 9♥ 10♥ J♥ Q♥ K♥ dose	7 draw 8 dream 9 dress 10 drift J drill Q drink K drip	7♣ dune 8♣ during 9♣ dust 10♣ dutch J♣ duty Q♣ dwarf K♣ dynamic
2	A eager 2 eagle 3 early 4 earn 5 earth 6 easily 7 east 8 easy 9 echo 10 ecology J economy Q edge K edit	Av	A → effort 2 → egg 3 → eight 4 → either 5 → elbow 6 → elder 7 → electric 8 → elegant 9 → element 10 → elephant J → elevator Q → elite K → else	A embark 2 embody 3 embrace 4 emerge 5 emotion 6 employ 7 empower 8 empty 9 enable 10 enact J end Q endless K endorse
3 ▼	A♠ enemy 2♠ energy 3♠ enforce 4♠ engage 5♠ engine 6♠ enhance 7♠ enjoy 8♠ enlist 9♠ enough 10♠ enrich J♠ enroll Q♠ ensure K♠ enter	Av	A entire 2 entry 3 envelope 4 episode 5 equal 6 equip 7 era 8 erase 9 erode 10 erosion J error Q erupt K escape	A essay 2 essence 3 estate 4 eternal 5 ethics 6 evidence 7 evil 8 evoke 9 evolve 10 exact J example Q excess K exchange
4	A♠ excite 2♠ exclude 3♠ excuse 4♠ execute 5♠ exercise 6♠ exhaust 7♠ exhibit 8♠ exile 9♠ exist 10♠ exit J♠ exotic Q♠ expand K♠ expect	Av	A expire 2 explain 3 expose 4 express 5 extend 6 extra 7 eye 8 eyebrow 9 fabric 10 face J faculty Q fade K faint	As faith 2s fall 3s false 4s fame 5s family 6s famous 7s fan 8s fancy 9s fantasy 10s farm Js fashion Qs fat Ks fatal
5	A♠ father 2♠ fatigue 3♠ fault 4♠ favorite 5♠ feature 6♠ february 7♠ federal 8♠ fee 9♠ feed 10♠ feel J♠ female Q♠ fence K♠ festival	Av	A fetch 2 fever 3 few 4 fiber 5 fiction 6 field 7 figure 8 file 9 film 10 filter J final Q find K fine	As finger 2s finish 3s fire 4s firm 5s first 6s fiscal 7s fish 8s fit 9s fitness 10s fix Js flag Qs flame Ks flash

	A♠ flat	A♥	A♦ focus	A ≗ forward
	2♠ flavor	2♥	2♦ fog	2 ♣ fossil
	3♠ flee	3♥	3 ♦ foil	3 ≗ foster
	4♠ flight	4♥	4 ♦ fold	4 ♣ found
	5♠ flip	5♥	5♦ follow	5 ♣ fox
	6♠ float	6♥	6♦ food	6 ≗ fragile
	7♠ flock	7♥	7 ♦ foot	7 ♣ frame
	8♠ floor	8♥	8♦ force	8 ♣ frequent
	9♠ flower	9♥	9♦ forest	9 ♣ fresh
Y	10♠ fluid	10♥	10♦ forget	10♣ friend
	J♠ flush	J♥	J♦ fork	J ≜ fringe
	Q♠ fly	0	Q♦ fortune	Q4 frog
	K∳ foam	K♥	K♦ forum	K ≜ front
		KV		
	A ∲ frost	A♥	A ♦ gallery	A . gaze _
	2♠ frown	2♥	2 ♦ game	2 ♣ general
	3♠ frozen	3♥	3 ♦ gap	3 ♣ genius
	4♠ fruit	4♥	4♦ garage	4 ≗ genre
	5♠ fuel	5♥	5♦ garbage	5 ≗ gentle
	6♠ fun	6♥	6♦ garden	6 ♣ genuine
	7 ∳ funny	7♥	7 ♦ garlic	7 ≗ gesture
	8♠ furnace	8♥	8♦ garment	8 ≗ ghost
	9 ♠ fury	9♥	9♦ gas	9 ≛ giant
•	10♠ future	10 🕶	10♦ gasp	10 ♣ gift
	J ♠ gadget	J♥	J♦ gate	J ≗ giggle
	Q gain	0♥	Q ♦ gather	Q ≜ ginger
	K♠ galaxy	K♥	K♦ gauge	K ≜ giraffe
		•	_	
	A♠ girl	A*	A♦ glue	A . grain
	2♠ give	2♥	2♦ goat	2 ♣ grant
	3♠ glad	3♥	3♦ goddess	3 ♣ grape
	4 ∳ glance	4♥	4♦ gold	4 ≗ grass
X	5♠ glare	5♥	5♦ good	5 ♣ gravity
	6♠ glass	6♥	6♦ goose	6 ≗ great
	7 ♠ glide	7♥	7 ♦ gorilla	7 ≗ green
	8♠ glimpse	8♥	8♦ gospel	8 ≗ grid
	9♠ globe	9♥	9♦ gossip	9 ≗ grief
•	10♠ gloom	10♥	10♦ govern	10 ♣ grit
	J ∳ glory	J♥	J♦ gown	J ≗ grocery
	Q glove	Q♥	Q ♦ grab	Q ≛ group
	K glow	K♥	K ♦ grace	K ≗ grow
	A♠ grunt	A y	A♦ hand	_
	•	2♥		A♣ heavy
	2♠ guard	3♥	2♦ happy	2♣ hedgehog
	3♠ guess	4	3♦ harbor	3♣ height
	4♠ guide	• • • • • • • • • • • • • • • • • • • •	4♦ hard	4♣ hello
	5♠ guilt	5♥	5♦ harsh	5♣ helmet
	6♠ guitar	6♥	6♦ harvest	6♣ help
	7♠ gun	7♥	7♦ hat	7♣ hen
	8♠ gym	8♥	8♦ have	8♣ hero
	9♠ habit	9♥	9♦ hawk	9♣ hidden
	10♠ hair	10 🔻	10♦ hazard	10♣ high
	J♠ half	J♥	J♦ head	J ≜ hill
	Q ♠ hammer	Q*	Q ♦ health	Q ≜ hint
	K ♠ hamster	K ♥	K♦ heart	K ≗ hip
	A♠ hire	A v	A♦ horror	A♣ hungry
	2♠ history	2♥	2♦ horse	2♣ hunt
	3♠ hobby	3♥	3♦ hospital	3♣ hurdle
10	4♠ hockey	4♥	4♦ host	4♣ hurry
	5♠ hold	5♥	5♦ hotel	5♣ hurt
	6♠ hole	6*	6♦ hour	6 ♣ husband
	7♠ holiday	7♥	7♦ hover	7 ♣ hybrid
	8♠ hollow	8♥	8+ hub	7⊈ Hybrid 8 ♣ ice
	9♠ home	9♥	9♦ huge	9 ♣ icon
▼		10 🗸	10 ♦ human	10 . idea
	10♠ honey J♠ hood	J♥	J♦ humble	
		0	Q+ humor	J ≜ identify O ♣ idle
	Q♠ hope	(∀		Q ≜ idle K♣ ignore
	K ≙ horn	N¥	K ♦ hundred	K ≜ ignore

24 illegal 34 34 34 35 36 37 36 36 37 38 38 38 38 38 38 38		A ill	A♥	A♦ income	A ≗ injury
3 index		2 ∳ illegal	2♥	2♦ increase	2 ♣ inmate
Se imitate Se Se indoor Se input Se immense Se immense Se Se industry Se inquiry Se infant Te Insane Se impact Se insane Se impose Se Se inflict Se insane Se impose Se Se Inform Se inside Inform Se inside Inform Se Inspire Je impulse Je Inhale Inhal			3♥	3 ♦ index	3 ♣ inner
6 immune 7 immune 7 immune 7 immune 8 impact 8 impact 8 impact 9 impose 9 impose 10 improve 10 impurove 10 impurov	-	4 ∲ image	4♥	4 ♦ indicate	4 ♣ innocent
7 immune 8 impact 8 impact 8 impact 9 impose 9 impose 9 impose 10 impure 10		5♠ imitate	5 y	5♦ indoor	5 ♣ input
8		6 ∳ immense	6♥	6♦ industry	6 ≜ inquiry
9 impose 10 improve 10 inform 10 inform 10 inspire 10 impulse Jv		7 ∳ immune	7♥	7 ♦ infant	7 ♣ insane
10+ improve 10		8 ∳ impact	8♥	8♦ inflict	8 . insect
Jainpulse Jv Jainherit Jainstall Qainch Qv Qainitial Qaintact Kainclude Kv Kv inject Kainterest Kaintere		9 ∳ impose	9♥	9♦ inform	9 ♣ inside
Q♠ inch K♠ include K♥	•	10♠ improve	10 ♥	10♦ inhale	10 . inspire
Ké include Kv		J ∳ impulse	J♥	J ♦ inherit	J ≗ install
A into 2 invest 2 invest 2 invest 3 invite 3 invite 3 invite 4 involve 4 inv		Q inch	Q *	Q ♦ initial	Q . intact
2 invest 3 invite 4 involve 5 involve 6 involve 6 involve 7 involve 7 involve 7 involve 9 inv		K ♠ include	K♥	K♦ inject	K ≜ interest
2 invest 3 invite 4 involve 5 involve 6 involve 6 involve 7 involve 7 involve 7 involve 9 inv		A into	A♥	A♦ jazz	A ≗ jungle
## involve ## ## jelly ## just 5 iron 5 v		2 ∳ invest	2♥	2♦ jealous	2 ♣ junior
5 iron 5 · · · · · · 5 · jewel 5 kangaroo 6 island 6 · · · · · · 6 · job 6 keen 7 isolate 7 · · · · · · 7 · join 7 keep 8 issue 8 · · · · · 8 · joke 8 ketchup 9 · item 9 · · · · · 9 · journey 9 key 10 · ivory 10 · · · · · 10 · joy 10 kick J · jacket J · · · · · J · judge J · kid Q · jaguar Q · · · · · Q · juice Q · kidney K · jar K · · · · · K · jump K · kind A · kingdom A · labor A · lady A · lawsuit 2 · kiss 2 · ladder 2 · lake 2 · layer 3 · kit 3 · · · · · · · · 4 · language 4 · leader 5 · kite 5 · · · · · · · 4 · language 4 · leader 5 · kite 5 · · · · · · · · · · · · · · · · · ·		3♠ invite	3♥	3♦ jeans	3 ♣ junk
6 island 7 isolate 7 isola		4 ♠ involve	4♥	4 ♦ jelly	4 ≜ just
6 island 7 isolate 7 isola		5♠ iron	5 y	5♦ jewel	5 ♣ kangaroo
8* issue 8*		6 ∳ island	6♥	6♦ job	
9\$ item 9\$\frac{1}{10\psi ivory} 10\$\frac{1}{10\psi ivory} 10\$\frac{1}{10\psi ivory} 10\$\frac{1}{10\psi ivory} 10\$\frac{1}{10\psi ivory} 10\$\frac{1}{10\psi joy} 10\$\frac{1}{10\psi kick} 10\$\frac{1}{10\psi joy} 10\$\frac{1}{10\psi kick} 10\$\frac{1}{10\psi judge} 10\$\frac{1}{10\psi kidd} 10\$\frac{1}{10\psi judge} 10\$\frac{1}{10\psi kidd} 10\$\frac{1}{10\psi judge} 10\$\frac{1}{10\psi kidd} 10\$\frac{1}{10\psi judge} 10\$\frac{1}{10\psi kiddey} 10\$\frac{1}{		7 ∳ isolate	7♥	7 ♦ join	7 ≗ keep
10 ivory 10 jacket 10 joy 10 judge 10 jude		8 ∳ issue	8♥	8♦ joke	8 ≗ ketchup
J♠ jacket J♥		9 ∳ item	9♥	9♦ journey	9 . key
Q♠ jaguar K♠ jar K♥	Y	10♠ ivory	10 ♥	10♦ joy	10♣ kick
K♠ jar K♥ K♠ jump K♣ kind A♠ kingdom A♥ labor A♠ lady A♣ lawsuit 2♠ kiss 2♥ ladder 2♠ lake 2♣ layer 3♠ kit 3♥ 3♠ lamp 3♣ lazy 4♠ kitchen 4♥ 4♠ language 4♣ leader 5♠ kite 5♥ 5♠ laptop 5♣ leaf 6♠ kitten 6♥ 6♠ large 6♣ learn 7♠ kiwi 7♥ 7♠ later 7♣ leave 8♠ knee 8♥ 8♠ latin 8♣ lecture 9♠ knife 9♥ 9♠ laugh 9♠ left 10♠ knock 10♥ 10♠ laundry 10♠ leg J♠ know J♥ J♠ lava J♣ legal Q♠ lab Q♥		J ≙ jacket	J♥	J ♦ judge	J ≗ kid
A♠ kingdom A♥ labor A♠ lady A♣ lawsuit 2♠ kiss 2♥ ladder 2♠ lake 2♣ layer 3♠ kit 3♥ 3♠ lamp 3♣ lazy 4♠ kitchen 4♥ 4♠ language 4♣ leader 5♠ kite 5♥ 5♠ laptop 5♣ leaf 6♠ kitten 6♥ 6♠ large 6♣ learn 7♠ kiwi 7♥ 7♠ later 7♣ leave 8♠ knee 8♥ 8♠ latin 8♣ lecture 9♠ knife 9♥ 9♠ laugh 9♣ left 10♠ knock 10♥ 9♠ laundry 10♠ leg J♠ know J♥ 10♠ laundry 10♠ leg J♠ know J♥ J♠ lava J♣ legal Q♠ lab Q♥ Q♠ law Q♣ legend		Q ∳ jaguar	Q *	Q ♦ juice	Q ≗ kidney
2♠ kiss 2♥ ladder 2♠ lake 2♣ layer 3♠ kit 3♥ 3♠ lamp 3♣ lazy 4♠ kitchen 4♥ 4♠ language 4♣ leader 5♠ kite 5♥ 5♠ laptop 5♣ leaf 6♠ kitten 6♥ 6♠ large 6♣ learn 7♠ kiwi 7♥ 7♠ later 7♣ leave 8♠ knee 8♥ 8♠ latin 8♣ lecture 9♠ knife 9♥ 9♠ laugh 9♠ left 10♠ knock 10♥ 9♠ laundry 10♠ leg J♠ know J♥ 10♠ laundry 10♠ leg Q♠ lab Q♥ Q♠ law Q♠ legend		K ∳ jar	K♥	K♦ jump	K ≗ kind
3♠ kit 3♥ 3♠ lamp 3♣ lazy 4♠ kitchen 4♥ 4♠ language 4♣ leader 5♠ kite 5♥ 5♠ laptop 5♣ leaf 6♠ kitten 6♥ 6♠ large 6♣ learn 7♠ kiwi 7♥ 7♠ later 7♣ leave 8♠ knee 8♥ 8♠ latin 8♣ lecture 9♠ knife 9♥ 9♠ laugh 9♠ left 10♠ knock 10♥ 10♠ laundry 10♠ leg J♠ know J♥ 10♠ lava J♣ legal Q♠ lab Q♥ Q♠ law Q♣ legend		A ♠ kingdom	A ∀ labor	A ♦ lady	A ♣ lawsuit
4♠ kitchen 4♥ 4♠ language 4♣ leader 5♠ kite 5♥ 5♠ laptop 5♣ leaf 6♠ kitten 6♥ 6♠ large 6♣ learn 7♠ kiwi 7♥ 7♠ later 7♣ leave 8♠ knee 8♥ 8♠ latin 8♣ lecture 9♠ knife 9♥ 9♠ laugh 9♠ left 10♠ knock 10♥ 10♠ laundry 10♠ leg J♠ know J♥ J♠ lava J♣ legal Q♠ lab Q♥ Q♠ law Q♣ legend		2♠ kiss	2♥ ladder	2♦ lake	2 ♣ layer
5♠ kite 5♥ 5♠ laptop 5♣ leaf 6♠ kitten 6♥ 6♠ large 6♣ learn 7♠ kiwi 7♥ 7♠ later 7♣ leave 8♠ knee 8♥ 8♠ latin 8♣ lecture 9♠ knife 9♥ 9♠ laugh 9♣ left 10♠ knock 10♥ 10♠ laundry 10♣ leg J♠ know J♥ J♠ lava J♣ legal Q♠ lab Q♥ Q♠ law Q♣ legend		3 ∳ kit	3♥	3 ♦ lamp	3 ≗ lazy
6♠ kitten 6♥ 6♦ large 6♣ learn 7♠ kiwi 7♥ 7♦ later 7♣ leave 8♠ knee 8♥ 8♦ latin 8♣ lecture 9♠ knife 9♥ 9♠ laugh 9♣ left 10♠ knock 10♥ 10♠ laundry 10♣ leg J♠ know J♥ J♠ lava J♣ legal Q♠ lab Q♥ Q♠ law Q♣ legend	\blacksquare T	4 ∳ kitchen	4♥	4 ♦ language	4 ≗ leader
7♠ kiwi 7♥ 7♦ later 7♣ leave 8♠ knee 8♥ 8♦ latin 8♣ lecture 9♠ knife 9♥ 9♦ laugh 9♣ left 10♠ knock 10♥ 10♦ laundry 10♣ leg J♠ know J♥ J♦ lava J♣ legal Q♠ lab Q♥ Q♦ law Q♣ legend		5 ∳ kite	5♥	5♦ laptop	5 . leaf
8♠ knee 8♥ 8♠ latin 8♣ lecture 9♠ knife 9♥ 9♠ laugh 9♣ left 10♠ knock 10♥ 10♠ laundry 10♣ leg J♠ know J♥ J♠ lava J♣ legal Q♠ lab Q♥ Q♠ law Q♣ legend		6 ∳ kitten	6♥	<mark>6♦</mark> large	6 ≗ learn
9\(knife 9\(\cdot \cd		7 ∳ kiwi	7♥	7 ♦ later	7 ≗ leave
10♠ knock		8 ∳ knee	8♥		8 ≗ lecture
J♠ know J♥ J♠ lava J♣ legal Q♠ lab Q♥ Q♠ law Q♣ legend		9♠ knife	9♥	9♦ laugh	9 ♣ left
Q♠ lab	•	10♠ knock	10♥	10♦ laundry	10 . leg
		J ≙ know	J♥	J♦ lava	J ≗ legal
K♠ label K♥ K♦ lawn K♣ leisure		Q lab	Q *	Q ♦ law	Q ≜ legend
		K ∳ label	K♥	K♦ lawn	K ≜ leisure

	A♠ lemon	A♥ lift	A•	A ♣ local
	2 ♠ lend	<mark>2♥</mark> light	2	2 ♣ lock
	3♠ length	3♥ like	3♦	3 ≗ logic
	4♠ lens	4♥ limb	4	4 ♣ lonely
	5♠ leopard	5♥ limit	5	5 ≜ long
1	6♠ lesson	6♥ link	6♦	6. lottory
	7♠ letter 8♠ level	7♥ lion 8♥ liquid	7 ♦ 8 ♦	7 ≜ lottery 8 ≜ loud
	9♠ liar	9♥ list	9	9 . lounge
	10♠ liberty	10♥ little	10 •	10♣ love
	J ♠ library	J♥ live	J	J ≜ loyal
	Q licensé	Q♥ lizard	Q ♦ loan	Q ≜ lucky
	K ♠ life	K♥ load	K ♦ lobster	K ≗ luggage
	A♠ lumber	A♥ make	A•	A ≗ marriage
	2♠ lunar	2♥ mammal	2	2 ≗ mask
	3♠ lunch	3♥ man	3♦	3 ♣ mass
	4♠ luxury	4♥ manage	4	4 ♣ master
	5♠ lyrics	5♥ mandate	5•	5♣ match
•	6♠ machine	6♥ mango	6♦	6 ♣ material
	7♠ mad 8♠ magic	7♥ mansion 8♥ manual	7♦ 8♦	7♣ math 8♣ matrix
	9♠ magnet	9♥ maple	9•	9 ≜ matter
	10♠ maid	10♥ marble	10 •	10. maximum
	J♠ mail	J♥ march	J •	J ♣ maze
	Q main	Q♥ margin	Q 	Q ≗ meadow
	K ♠ major	K♥ marine	K ♦ market	K ≗ mean
	A♠ measure	A♥ merit	A•	A ≗ minor
	2♠ meat	2♥ merry	2	2 ♣ minute
	3♠ mechanic	3♥ mesh	3♦	3 ♣ miracle
	4♠ medal	4♥ message	4	4 ≗ mirror
3	5♠ media	5♥ metal	5	5 ≜ misery
	6♠ melody	6♥ method	6 +	6♣ miss
	7♠ melt	7♥ middle	7 ♦ 8 ♦	7 ♣ mistake
	8♠ member 9♠ memory	8♥ midnight 9♥ milk	9.	8 ♣ mix 9 ♣ mixed
	10♠ mention	10♥ million	10 ♦	10♣ mixture
	J ≜ menu	J♥ mimic	J•	J ♣ mobile
	Q mercy	Q ♥ mind	Q •	Q ≗ model
	K ♠ merge	K♥ minimum	K♦	K ≗ modify
	A♠ mom	A♥ motor	A•	A ≗ must
	2♠ moment	<mark>2♥</mark> mountain	2	2 ≗ mutual
	3♠ monitor	3♥ mouse	3♦	3 ♣ myself
	4♠ monkey	4♥ mo∨e	4	4 ♣ mystery
	5♠ monster	5♥ movie	5 +	5 ♣ myth
'	6♠ month	6♥ much 7♥ muffin	6♦ 7 ♦	6♣ naive
	7♠ moon 8♠ moral	8♥ mule	8.	7 ≗ name 8 ≗ napkin
	9♠ more	9♥ multiply	9	9 ♣ narrow
	10♠ morning	10♥ muscle	10 •	10♣ nasty
	J♠ mosquito	J♥ museum	J	J ≜ nation
	Q♠ mother	Q♥ mushroom	Q •	Q ≗ nature
	K♠ motion	K♥ music	K♦	K ≗ near
	A ♠ neck	A♥ next	A•	A ♣ notice
	2♠ need	2♥ nice	2	2 . novel
	3♠ negative	3∀ night	3♦	3♣ now_
	4♠ neglect	4♥ noble	4	4 ♣ nuclear
	5♠ neither	5♥ noise	5	5♣ number
	6♠ nephew	6♥ nominee	6♦ 7♦	6 ♣ nurse 7 ♣ nut
	7♠ nerve 8♠ nest	7♥ noodle 8♥ normal	8.	7 ≜ nut 8 ♣ oak
	9♠ net	9♥ north	9	9 ♣ obey
▼	10♠ network	10♥ nose	10 •	10 ♣ object
	J ♠ neutral	J♥ notable	J♦	J ♣ oblige
	Q never	Q ♥ note	Q •	Q ≗ obscure
	K♠ news	K♥ nothing	K♦	K♣ observe

		obtain obvious		olive olympic			orange orbit
		occur	_	omit			orchard
_	_	ocean	_	once		 _	order
		october	_	one			ordinary
		odor		onion	•	 _	
		off		online	•		organ orient
		offer		only			original
		office	_	open		 _	orphan
		often		opera			ostrich
•		oil		opinion			other
		okay		oppose		 _	outdoor
		old		option		 	outer
						_	
		output	_	pair		 _	pass
		outside		palace		 _	patch
	_	oval		palm			path
		oven		panda			patient
		over		panel		 _	patrol
	_	OWN		panic			pattern
		owner	_	panther	2.7	 _	pause
	_	oxygen		paper			pave
		oyster		parade		 	payment
•		ozone		parent		 _	peace
		pact		park		 _	peanut
		paddle		parrot party			pear
	I \ ₹	page			IX.	 I/æ	peasant
	A♠	pelican	A♥	physical	A♦	 A♣	pitch
	2♠	pen		piano			pizza
		penalty		picnic			place
		pencil		picture			planet
\mathbf{X}	_	people		piece			plastic
		pepper		pig			plate
	_	perfect		pigeon	2.7	 _	play
	_	permit		pill	I .		please
		person		pilot			pledge
	10♠			pink			pluck
	_	phone		pioneer		 _	plug
		photo		pipe		 	plunge
	1/4	phrase	IX¥	pistol	IX.	1/4	poem
		poet		potato	A♦		price
		point		pottery			pride
		polar		poverty			primary
		pole		powder			print
	_	police		power		 _	priority
	_	pond		practice			prison
	_	pony	_	praise			private
	_	pool		predict			prize
		popular		prefer			problem
•		portion		prepare present			process
		position possible		•			produce profit
		post		pretty prevent	_		program
				•		_	
		project	_	pumpkin		 _	quantum
		promote		punch		 _	quarter
	_	proof		pupil			question
10	_	property		puppy			quick
	_	prosper		purchase		 _	quit
		protect	_	purity			quiz
		proud		purpose			quote
	_	provide		purse		 _	rabbit
▼ .		public		push		 	raccoon
•		pudding pull	10♥	puzzle			race rack
	_	pulp		pyramid		 _	radar
		pulse		quality			radio
	117	Patoc		quurrey	11.4	11.2	. 4410

	A♠ rail	A♥ raw	A	A ♣ reflect
	2♠ rain	2♥ razor	2	2 ♣ reform
	3♠ raise	3♥ ready	3♦	3 ♣ refuse
_	4♠ rally	4♥ real	4	4 ♣ region
	5♠ ramp	5♥ reason	5	5 ♣ regret
	6♠ ranch	6♥ rebel	6♦	6 ≗ regular
	7 ∲ random	7♥ rebuild	7	7 ≗ reject
	8♠ range	8♥ recall	8	8 ≗ relax
	9♠ rapid	9♥ receive	9	9 ♣ release
•	10∳ rare	10♥ recipe	1 0 ♦	10 . relief
	J ∳ rate	J♥ record	J♦	J ≗ rely
	Q ∳ rather	Q♥ recycle	Q •	Q ≗ remain
	K ≜ raven	K♥ reduce	K♦	K♣ remember
	A♠ remind	A♥ resist	A♦ ribbon	A ♣ rice
	2♠ remove	2♥ resource	2	2 ♣ rich
	3♠ render	3♥ response	3♦	3 ♣ ride
	4 ♠ renew	4♥ result	4	4 ♣ ridge
	5♠ rent	5♥ retire	5 +	5 ♣ rifle
	6♠ reopen	6♥ retreat	6 •	6 ♣ right
	7♠ repair	7♥ return	7 •	7 ♣ rigid
	8 ≜ repeat	8♥ reunion	8 •	8 ♣ ring
	9 ≜ replace	9♥ reveal	9	9 ♣ riot
	10♠ report	10♥ review	10 ♦	10 ♣ ripple
	J♠ require	J♥ reward	J♦	J ≜ risk
	Q rescue	Q♥ rhythm	Q •	Q ≜ ritual
	K♠ resemble	K ∀ rib	K♦	K ₄ rival
	A♠ river	A♥ round	A♦ safe	A ≗ salad
	2 ≜ road	2♥ route	2♦ sail	2 ♣ salmon
	3♠ roast	3♥ royal	3♦	3 ♣ salon
$\blacksquare T$	4♠ robot	4♥ rubber	4	4 ♣ salt
K	5♠ robust	5♥ rude	5 •	5 ♣ salute
	6♠ rocket	6♥ rug	6 •	6 ♣ same
	7♠ romance	7♥ rule	7 •	7 ♣ sample
	8♠ roof	8♥ run	8 +	8 ≗ sand
	9♠ rookie	9♥ runway	9	9 ♣ satisfy
•	10♠ room	10♥ rural	10 ♦	10 ≗ satoshi
	J ≜ rose	J♥ sad	J♦	J . sauce
	Q rotate	Q♥ saddle	Q •	Q ≜ sausage
	K♠ rough	K ♥ sadness	K∳	K ≜ save

1 B	A♠ say 2♠ scale 3♠ scan 4♠ scare 5♠ scatter 6♠ scene 7♠ scheme 8♠ school 9♠ science 10♠ scissors J♠ scorpion Q♠ scout K♠ scrap	Av screen 2v script 3v scrub 4v sea 5v search 6v season 7v seat 8v second 9v secret 10v section Jv security Qv seed Kv seek	A segment 2 select 3 sell 4 seminar 5 senior 6 sense 7 sentence 8 series 9 service 10 session J settle Q setup K seven	A
2	A shallow 2 share 3 shed 4 shell 5 sheriff 6 shield 7 shift 8 shine 9 ship 10 shiver J shock Q shoe K shoot	Av shop 2v short 3v shoulder 4v shove 5v shrimp 6v shrug 7v shuffle 8v shy 9v sibling 10v sick Jv side Qv siege Kv sight	A sign 2 silent 3 silk 4 silly 5 silver 6 similar 7 simple 8 since 9 sing 10 siren J sister Q situate K six	A 2 3 4 5 6 7 8 10 Q K size
3	A♠ skate 2♠ sketch 3♠ ski 4♠ skill 5♠ skin 6♠ skirt 7♠ skull 8♠ slab 9♠ slam 10♠ sleep J♠ slender Q♠ slice K♠ slide	Av slight 2v slim 3v slogan 4v slot 5v slow 6v slush 7v small 8v smart 9v smile 10v smoke Jv smooth Qv snack Kv snake	A snap 2 sniff 3 snow 4 soap 5 soccer 6 social 7 sock 8 soda 9 soft 10 solar J soldier Q solid K solution	A =
1 - 6	A solve 2 someone 3 song 4 soon 5 sorry 6 sort 7 soul 8 sound 9 soup 10 source J south Q space K spare	Av spatial 2v spawn 3v speak 4v special 5v speed 6v spell 7v spend 8v sphere 9v spice 10v spider Jv spike Qv spin Kv spirit	A split 2 spoil 3 sponsor 4 spoon 5 sport 6 spot 7 spray 8 spread 9 spring 10 spy J square Q squeeze K squirrel	A 2 3 4 5 6 7 8 10 Q K
	A stable 2 stadium 3 staff 4 stage 5 stairs 6 stamp 7 stand 8 start 9 state 10 stay J steak Q steel K stem	Av step 2v stereo 3v stick 4v still 5v sting 6v stock 7v stomach 8v stone 9v stool 10v story Jv stove Qv strategy Kv street	A strike 2 strong 3 struggle 4 student 5 stuff 6 stumble 7 style 8 subject 9 submit 10 subway J success Q such K sudden	A

A♠	suffer A♥	surge	A♦	swim	A♣	
2♠	sugar 2♥	surprise	2♦	swing	2♣	
3♠	suggest 3♥	surround	3♦	switch	3♣	
4♠	suit 4♥	survey	4♦	sword	4♣	
5♠	summer 5♥	suspect	5♦	symbol	5♣	
6 54	sun 6♥	sustain	6♦	symptom	6♣	
7♠	sunny 7♥	swallow	7♦	syrup	7♣	
8♠	sunset 8♥	swamp	8	system	8 ♣	
9♠	super 9♥	swap		table	9♣	
	supply 10♥	swarm	10♦	tackle	10♣	
J♠	supreme J♥	swear	J♦	tag		
-	•	sweet	•	tail	-	
K♠	surface K♥	swift	K♦	talent	K♣	
A♠	talk A♥	tennis	A♦	this	A♣	
		tent		thought	2♣	
		term		three	3♣	
	•	test	4♦	thrive	4♣	
7 5 ♠	task 5♥	text	5♦	throw	5♣	
6♠	taste 6♥	thank	6♦	thumb	6♣	
7♠	tattoo 7♥	that	7♦	thunder	7♣	
8♠	taxi 8♥	theme	8	ticket	8 ♣	
9♠	teach 9♥	then	9♦	tide	9♣	
	team 10♥	theory	10♦	tiger	10♣	
J♠	tell J♥	there	J♦	tilt	J♣	
Q♠	ten Q♥	they	Q◆	timber	Q♣	
K♠	tenant K♥	thing	K♦	time	K♣	
A	tiny A♥	tomato	A♦	toss	A.	
		tomorrow		total	_	
		tone		tourist	_	
1 🛦		tongue		toward	4♣	
9 5♠		tonight		tower		
		tool		town	6♣	
7.	_	tooth		toy	7♣	
		top	_	track	8 ♣	
		topic	9♦	trade	9♣	
10♠			10♦	traffic	10♣	
J♠		torch	J♦	tragic	J♣	
Q♠	toilet Q♥	tornado	Q◆	train	Q♣	
K♠	token K♥	tortoise	K♦	transfer	K♣	
ΔΔ	trap A♥	trophy	ΔΦ	tunnel	Δ.	
		trouble		turkey		
	_	truck		turn		
1.		true		turtle	_	
5♠	•	truly		twelve	5♣	
6.		trumpet		twenty	-	
7.	_	trust	_	twice	7♣	
8♠		truth	8	twin	8♣	
9 54 64 74 84 94	tribe 9♥	try	9•	twist	9♣	
10♠	trick 10♥	tube	10♦	two	10♣	
J♠	trigger J ♥	tuition	J♦	type	J♣	
Q♠	trim Q♥	tumble	Q◆	typical	Q♣	
K♠	trip K♥	tuna	K♦	ugly	K♣	
A♠	umbrella A♥	universe	A♦	urge	A♣	
		unknown	_	usage	_	
		unlock	_	use	3♣	
	_	until	_	used	-	
		unusual		useful	5♣	
■ 6♠	under 6♥	unveil	6♦	useless	6♣	
7♠	undo 7♥	update		usual	7♣	
84	unfair 8♥	upgrade	8♦	utility	8 ♣	
		uphold		vacant		
		•		vacuum		
_	_	upper		vague	_	
		upset		valid		
K♠	unit K♥	urban	K♦	valley	K♣	

		verify		violin		
		version		virtual		
		very		virus		
	Pro-	vessel		visa		
		veteran		visit_		
		viable		visual		
7♠		vibrant		vital		
`		vicious		vivid		
		victory		vocal		
_		video		voice	10♣	
J♠		view		void	-	
Q♠	venue Q♥	village		volcano	Q♣	
K♠	verb K♥	vintage	K♦	volume	K♣	
A♠	vote A♥	wasp	A♦	weird	A♣	width
2♠	voyage 2♥	waste	2♦	welcome	2♣	
3♠	wage 3♥	water	3♦	west	3♣	
4♠	wagon 4♥	wave	4♦	wet	4♣	
5♠	wait 5♥	way	5♦	whale	5♣	
6♠	walk 6♥	wealth	6♦	what	6♣	
7♠	wall 7♥	weapon	7♦	wheat	7♣	
74 84 94 104	walnut 8♥	wear	8•	wheel	8 ♣	
9♠	want 9♥	weasel	9♦	when	9♣	
10♠	warfare 10♥	weather	10♦	where	10♣	
J♠	warm J♥	web	J♦	whip	J♣	
Q♠	warrior Q♥	wedding	Q◆	whisper	Q♣	
K♠	wash K♥	weekend	K♦	wide	K♣	
A♠	wife A♥	wish	A♦	wreck	A♣	zone
2♠	wild 2♥	witness	2♦	wrestle	2♣	Z00
3♠	will 3♥	wolf	3♦	wrist	3♣	
- - 7 4♠	win 4♥	woman	4♦	write	4♣	
K 5♠ 6♠	window 5♥	wonder	5♦	wrong	5♣	
6♠	wine 6♥	wood	6♦	yard	6♣	
_ 7.	wing 7♥	wool		year	7♣	
84		word		yellow	8 ♣	
84 94	winner 9♥	work		you	9♣	
10♠	winter 10♥	world		young	10♣	
J♠	wire J♥	worry		youth	J♣	
		worth		zebra	0♣	
	_	wrap		zero		
				- -		