

SPECIAL VOWEL-CONSONANT PATTERNS

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Two constraints are imposed on the words offered in this article. The first is by way of their vowel-consonant (V-C) patterns; the second is a numerical one.

V-C PATTERNS

Only words which have a palindromic and/or tautonymic V-C pattern are admitted. For example:

CLOT.TING has the palindromic V-C pattern CCvC.CvCC

JUGG.LERS has the tautonymic V-C pattern CvCC.CvCC

COPEN.HAGEN has both a palindromic and tautonymic V-C pattern CvCvC.CvCvC

But these examples have not been chosen at random. The word OVERT.AKING has a tautonymic V-C pattern (vCvCC.vCvCC), but it is not admitted. So, what characteristic do the first three words possess which OVERTAKING lacks? The answer is a numerical one.

NUMERICAL REQUIREMENTS

Let us begin by assigning A=1, B=2 through Z=26. The words which passed the V-C pattern test only pass the second test if they are numerical palindromes, numerical tautonyms, both numerical palindromes and tautonyms, or balanced words (word total divided by number of letters = 13.5).

CLOT.TING is a numerical tautonym (50.50); JUGG.LERS is a numerical palindrome (45.54); COPEN.HAGEN is also a numerical palindrome (53.35). The word HORN.LESS (CvCC.CvCC), a V-C tautonym, is both a numerical palindrome and a numerical tautonym (55.55). OVERT.AKING does not pass any of the numerical tests, so is excluded.

For further reading, articles concerned with numerical tautonyms, numerical palindromes, and balanced words which have appeared in Word Ways include:

70010 *Numerical Tautonyms* by Darryl Francis

70244 *6-Letter Numerical Tautonyms* by Leslie Card

71185 *8-Letter Numerical Tautonyms* by Leslie Card

74024 *Palindromic Letter Sequences* by Leslie Card and A. Ross Eckler

94206 and 95040 *Balanced Words and Balanced Dreams* by Susan Thorpe

96242 *Numerical Palindromes Part 1* by Susan Thorpe

97066 *Numerical Palindromes Part 2* by Rex Gooch

97204 and 98011 *Varieties of Balanced Words, Parts 1 and 2* by Rex Gooch

REFERENCES

Unreferenced words can be found in the Oxford English Dictionary, Second Edition.

References for non-OED words are:

ch Chambers English Dictionary

d Dorland's Medical Dictionary

hod Handbook of American Indians edited by F.W. Hodge, 1907

ro Roget's Thesaurus

st Stedman's Medical Dictionary

tf Tertiary Faunas by A. Morley Davies

w2/w3 Webster's Unabridged Dictionary, Second/Third Edition

Taken from the United States Board on Geographic Names (BGN), locations are identified by country using the following abbreviations:

Algeria, Angola, Australia, Azerbaijan, Bangladesh, Benin, Brazil, Bulgaria, Burma, Chad, China, Comoros, Congo (DR), Congo (Republic), Cyprus, Denmark, East Timor, Ecuador, Egypt, Finland, France, French Polynesia, Germany, Guinea, Hungary, India, Indonesia, Iran, Ireland, Ivory Coast, Japan, Mali, Morocco, Mozambique, Netherlands, Norway, Peru, Philippines, Romania, S.Africa, S.Korea, Sri Lanka, Togo, Tunis, Ukraine, United Kingdom

THE TABLES

In the tables which follow, the words are either solid or hyphenated. Phrases are not admitted. Only those patterns which have at least one vowel and one consonant in each half of the word are admitted. Thus all-vowel words and all-consonant words do not appear. Words which themselves are tautonyms or palindromes are excluded, along with words harbouring the controversial-status letter Y. For each V-C pattern, a single example is provided for each of the four numerical orders, wherever possible. V-C patterns for which no numerical example was found are listed at the end of each table under 'none'.

V-C PALINDROMES

	numerical pal.	numerical taut.	num. pal./taut	balanced
6 letters				total = 81
Cvv.vvC	HAO.UAT (24.42) <i>Tun</i>	HOO.UEL(38.38)	COO.IES (33.33)	LOUIES
CCv.vCC	FLE.ESH (23.32)	WHE.ELS (36.36)	SMA.ILL (33.33)	SKIERS
vCC.CCv	UCH.HNA (32.23) <i>Ban</i>	IKH.SHA (28.28) <i>Egy</i>		ELLHWU
vvC.Cvv	AAS.BAI (21.12) <i>w2</i>	EAR.NEE (24.24)	OUS.SOU (55.55) <i>Mor</i>	OUT-SEA
8 letters				total = 108
CCvC.CvCC	SKID.DING (43.34)	CLOT.TING (50.50)	CROS.SISH (55.55)	STIRLING
CCvv.vvCC				FRAOUISS <i>Alg</i>
CvCC.CCvC	BARD.SHIP (25.52)	MENS.TRAL (51.51)	MINS.TREL (55.55)	MALTSTER
CvCv.vCvC	REHO.USES (46.64)	VE.NE.ERER(46.46) <i>w2</i>	RETA.ILER (44.44)	DEVOURER
Cvvv.vvC		TOUA.OUIL (57.57) <i>Mor</i>		ZOUAOUAH <i>Mor</i>
vvCv.vCvv		OURO.ULOU (69.69) <i>Cha</i>		UAQU EQUÉ <i>Moz</i>
vCvv.vvCv		AZAO.UIDI(43.43) <i>Mor</i>	UBAI.EIRA (33.33) <i>Bra</i>	
vCvC.CvCv	UNIT.RINE (64.46)	ENIG.MATA (35.35)	AMAR.DASI(33.33) <i>Ind</i>	EXERTIVE
None	CCCv.vCCC	vvvC.Cvvv	vvCC.CCvv	vCCC.CCCv

V-C PALINDROMES

	numerical pal.	numerical taut.	num. pal./taut	balanced				
10 letters				total = 135				
CCCvC.CvCCC	SPLIT-RINGS (76.67)	SCREW-BOLTS (68.68)		SHRIPPINGS				
CCvCv.vCvCC	CLOLO.URISH (57.75) <i>Ire</i>	PREVI.EWERS(70.70)		PROTEIFORM				
CCvC.CvCC	BROOM.FIELD (63.36)	PLAIN-GOING (52.52)	CHAUK.MAING(44.44) <i>Bur</i>	SQUALLIEST				
CvCCC.CCCvC		SIRSH.TSNIK (73.73) <i>Bul</i>		GUSHTKHVAR <i>Ira</i>				
CvCCv.vCCvC	GASCO.IGNES (45.54)	KELLI.ELLAS (49.49) <i>ff</i>	DUCK-E.AGLES (44.44)	VANQUISHES				
CvCC.CCvC	KAAPS.PRUIT(48.84) <i>SA</i>	GIANT-GREAT(51.51)	HAIRS.TREAK(55.55)	HOEDS.PRUIT SA				
CvCvC.vCvC		COOTO.UNIES(68.68) <i>hod</i>	BIESI.EHOEK (44.44) <i>SA</i>	MOOROBOOL <i>Aul</i>				
vCvCC.CCvCv	ORUDZ.HDIZA(84.48) <i>Aze</i>	IDOL-T.HRONE (60.60)		OVERSTRIDE				
vCCvC.CvCCv	ASCEN.DABLE (42.24)	UNDER.VALVE (62.62)		ATTURCOPPE				
None	CCCCv.vCCCC	CCCv.vvCCC	CCv.vvvCC	CvCv.vvCvC	Cvvv.vvvC	vvvC.Cvvv	vvCC.CCvv	vv
	vvCvC.CvCv	vvCCv.vCCv	vvCCC.CCCv	vCvv.vvCv	vCvC.CvCv	vCCv.vCCv	vCCCC.CCCC	

V-C PALINDROMES

	numerical pal.	numerical taut.	num. pal./taut	balanced			
12 letters				total = 162			
CCvCCv.	FRICTI.ON-BALL (65.56)	SLIP-PA.INTING (73.73)	BROMBE.ER-BERG	SPURLEATHERS			
CCvCvC.	SLOVEN.LINESS (87.78)	FRATER.NALISM (68.68)	(55.55) <i>Ger</i>	BRUNETTENESS			
CvCCCv.	TONGJI.ANGTAN (75.57) <i>Chi</i>	BESTRA.UGHTED (65.65)		DEMONSTRATOR			
CvCvCC.	PARING-CHISEL (65.56)	LIVING-GRIPER (73.73)		VASONEUROTIC <i>st</i>			
CvCvCv.	KINESI.OMETER (67.76)	KERATO.IDITIS (70.70) <i>d</i>		KOUKKO.ULLIES <i>Cyp</i>			
CvCvC.	COLOUR-COATED (84.48)	PERIOS.TEITIS (82.82)		IRIPINNUWEWA <i>SLa</i>			
CvCCv.	QUASSI.A-TREES (86.68)	QUESTI.ON-HOUR (91.91)		OSMONDTHORPE			
CvCvC.	NEUROP.TEROUS (89.98)	NEUROC.RANIUM (76.76)		(W.Yorks)			
vCvCvC.	ITACAM.BIRUCU (47.74) <i>Bra</i>	OVERAN.NOTATE (75.75) <i>w2</i>		ENDROCPUSZTA <i>Hun</i>			
vCvCCv.	AFERTO.UCHENE(65.56) <i>Mor</i>	ABOSSO.UMKOFE (71.71) <i>Tog</i>					
vCCvCC.	ISDALS.FJELLA (64.46) <i>Nor</i>	ANDERS.SVEDJA (61.61) <i>Swe</i>					
vvCvCv.		OUZARO.ULAZOU (96.96) <i>Gun</i>					
vvCCCv.		EENDVO.ELVLEI (65.65) <i>SA</i>					
vCCvCv.		ANGAGU.ACUCHO (51.51) <i>Ecu</i>	AMBODI.AZAMBA (44.44) <i>Mad</i>				
vCCCCv.		ILLVET.JORNHO (80.80) <i>Nor</i>					
None	CCCCCv.vCCCC	CCCCvC.CvCCCC	CCCCv.vvCCCC	CCCvCC.CCvCCC	CCCvCv	vCvCCC	CCCvC.vCvCCC
	CCCvv.vvvCCC	CCvCCC.CCCvCC	CCvCv.vCvCC...CCvvC.CvvCC	CCvvv.vvvCC	CvCCv.vvCCvC	CvCvv.vvvC	
	CvCCC.CCCvC	CvCv.vvCvC	CvvCC.CCvvC	CvvCv.vCvvC	Cvvvv.vvvvC		
	vvvvC.Cvvvv	vvvCv.vCvvv	vvvCC.CCvvv	vvCvC.CvCvv	vvCCv.vCCvv	vvvCC.CCCvv	vvCvv.vvvCv
	vvCvC.CvCv	vvCvCC.CCvCv	vvCCvC.CvCCv	vvCCCC.CCCCv	vCvvv.vvvCv	vCvvC.CvvCv	vCvCC.CCvCv
	vCvCv.vvCvC	vCvCCC.CCCvCv	vCCvv.vvCCv	vCCvC.CvCCv	vCCv.vvCCv	vCCCC.CCCCv	

V-C TAUTONYMS

	numerical pal.	numerical taut.	num. pal./taut.	balanced total = 81
6 letters				
CCv.CCv	GLO.SSE (34.43)	PRO.NTO (49.49)	CRA.NCE (22.22)	STANZA
Cvv.Cvv	MAI.RIE (23.32)	TAI.PEI (30.30)	LAI.LIA (22.22) <i>Ino</i>	SOULIE
vCC.vCC	EXP.OST (45.54)	UTM.OST (54.54)	UPG.ETS (44.44)	ARREST
vvC.vvC	AUT.OED (42.24)	AER.IAN (24.24)	EIS.IES (33.33)	IONIUM
				total = 108
8 letters				
CCCv.CCCv	TSRE.NCHA (62.26) <i>Bul</i>	SCHA.CKLE (31.31)	THRI.SSLE (55.55)	STRINKLE
CCvC.CCvC	STUM.BLER (73.37)	FREC.KLED (32.32)	PRAT.TLER (55.55)	PLECTRUM
CCvv.CCvv	TSOU.NGOU(75.57) <i>Co</i>	CHIO.NKAI (35.35) <i>Mal</i>	KREU.Z-SEE(55.55) <i>Ger</i>	MBOUNGOU <i>Com</i>
CvCC.CvCC	JUGG.LERS (45.54)	BAGGBACK (17.17) <i>Sw</i>	HORN.LESS (55.55)	PELTLESS
CvCv.CvCv	FOCA.LIZE (25.52)	MEDI.CINE (31.31)	FORE.DUNE (44.44)	PAVONIZE (54.54)
Cvvv.Cvvv		PAUA.REOA (39.39) <i>FP</i>		SUIUCUIE <i>Bul</i>
vCCC.vCCC	ABSC.ONDS (25.52)	EMBR.ANDS (38.38)	ORCH.ALLS (44.44)	INSTINCT
vCvC.vCvC	OPER.ATES (54.45)	EVOC.ATES (45.45)	OPAL.IZED (44.44)	ATOMIZES
vCvv.vCvv	ANAA.OTOU (17.71) <i>FP</i>	UROI.ULUI (63.63) <i>Rom</i>		
vvCC.vvCC	IECT.OURS (37.73)	AIRM.AILS (41.41) <i>ch</i>		OUTWEIGH
vvCv.vvCv.		OUTO.UOTO (71.71) <i>Ben</i>		
vvvC.vvvC			AOUR.OUAR(55.55) <i>Man</i>	

V-C TAUTONYMS

				total = 135
10 letters				
CCCCv.CCCCv			TSCHE-DSCHU (55.55) <i>SK</i>	
CCCvC.CCCvC		STROV.STRUP (94.94) <i>Den</i>		STRENGTHES
CCCvv.CCCvv				DZWIERZNIA <i>Pol</i>
CCvCv.CCvCv	TRIFU.RCATE (74.47)	RHIPI.PTERA (60.60) <i>ch</i>	TRAVE..RTINE (66.66)	TRICUSSATE
CCvvC.CCvvC	CHAIN-WHEEL (35.53)	SHAUC.HLIER (52.52)	?SNAIL-CLOUD (55.55)	PLOUGH-FOOT
CvCCC.CvCCC	LETC.H.WORTH (48.84) <i>UK</i>	HORNC.HURCH(58.58) <i>UK</i>	PALM-B.RANCH (44.44)	KINGSNORTH <i>UK</i>
CvCCv.CvCCv	PONTI.CELLO (74.47)	COMPA.TIBLE (48.48)	BAFWA.BENGE (33.33) <i>CoD</i>	NURTURANCE
CvCvv.CvCvv	LEGUI.BOREE (54.45) <i>ET</i>	BIJOU.TERIE (57.57)	BATIA.LIBIA(33.33) <i>CoD</i>	LONOIRIQUE <i>Ang</i>
CvvCC.CvvCC	SAINT.FIELD (63.36) <i>UK</i>	WEALT.HIEST (61.61)		FOOT-PLOUGH
CvvCv.CvvCv	HAAPA.VUOMA (27.72) <i>Sw</i>	HIETA.VAARA (43.43) <i>Fin</i>	REINI.TIATE (55.55)	COUTURIERE
vvCCC.vvCCC		?OERGREENST (63.63)		OUTDRAUGHT
vCvvC.vCvvC		ALEUR.ONOID (57.57) <i>st</i>	DOUGH.RUAGH (55.55) <i>ire</i>	EQUANIMOUS
vCvCC.vCvCC	UNOBL.IGING (64.46)	ADULT.ERANT(58.58)	ORANG.E-PINK (55.55)	EXORCISERS <i>ch</i>
vCCvC.vCCvC	UNMET.ALLIC (73.37)	UNDEB.ARRED (46.46)	ALTIM.ETRIC (55.55)	UNRESOLVED
None	CCvvv.CCvvv	Cvvvv.Cvvvv		
vvvC.vvvC	vvvCv.vvvCv	vvvCC.vvvCC	vvCvC.vvCvC	vvCCv.vvCCv
			vCvvv.vCvvv	vCCvv.vCCvv
				vCC

V-C TAUTONYMS

numerical pal.	numerical taut.	num. pal./taut.	balanced
12 letters			total = 162
As with the 12-letter palindromic V-C patterns, only the V-C pattern of the first half of the word is given. The second half is a repeat of this. CCCvCC. = CCCvCC.CCCvCC			
CCCvCC.	STRENG.THLESS (83.83)		DZHUGASTROVA <i>Ukr</i>
CCCvCv.			STRAIGHT-FOUR
CCCvvC.			
CCvCCC.	SWITCH-PLANTS <i>ch</i>		
CCvCCv.	STADDI.SCOMBE (in Devon)		
CCvCvC. PROCES.S-MAKER (76.67)	PLANIS.PHERES (71.71)		TROPOSPHERIC
CvCCCC.			?FULL-STRENGTH
CvCCCv. PONT-DE.-L'ARCHE (74.47) <i>Fra</i>	JANCHI.PALLCA (45.45) <i>Per</i>		RAZZLE-DAZZLE
CvCCvv. CORRIE.MULZIE (68.86) <i>UK</i>			
CvCvCC. BEPUZZ.LEMENT (96.69)	FENEST.RATING (69.69)		DISAPPROVERS
CvCvCv. ?TUBOPA.LATINA (75.57)	TARAMA.SALATA (54.54)	PEDATI.LOBATE (55.55)	REPOPULARIZE
CvCvvC. CAQUET.TERIES (67.76) <i>ro</i>	MANIAP.HOBIAS (54.54) <i>st</i>	MEROAC.RANIAL(55.55) <i>st</i>	MEDIOTRUSION <i>st</i>
CvvCCC.			DEOBSTRUENTS
CvvCCv. LUOSSA.SAIVVE(87.78) <i>Nor</i>	GUERRA.SIERRA (70.70) <i>Phi</i>		RIEPPU.VUODNA <i>Nor</i>
CvvCvC. SEA-TOR.TOISES (78.87)	GAULAR.DIERES(60.60) <i>Fra</i>	NIEDERRIEDEN(55.55) <i>Ger</i>	COELOPLEURUS <i>tf</i>
CvvCvv.	TIEMOUDOUGOU (83.83) <i>IC</i>		MOODOOGOOROO <i>Aul</i>
vCvCvC. AMINOP.URINES (68.86) <i>w2</i>	OVERED.UCATES (69.69)		ISOVOLUMINAL <i>w2</i>
vCvCCv. UNIMPA.IRABLE (74.47)			UMATTAIVEMPU <i>SLa</i>
vCvCCC. OVERFL.OWINGS (78.87)	OVERSC.ORINGS (82.82) <i>w2</i>		ELECTROVERTS <i>d</i>
vCCvvC. ABCOUD.ERMEER (46.64) <i>Net</i>	ANGIOP.ATHIES (62.62) <i>st</i>		ESLOURENTIES <i>Fra</i>
vCCvCv.	OPHIDI.OPHOBE (61.61) <i>st</i>		OTSUKUE-SHIMA <i>Jap</i>
vCCvCC. ANTISK.IDDING (74.47) <i>w2</i>	ATTEMP.ERMENT (75.75)	INTEND.EDNESS (66.66)	INTERCEPTORS
vCCCCvC.	INFRAV.ENTRAL (70.70) <i>w2</i>		ORRBOLESSJON <i>Swe</i>

None CCCCCv.CCCCCv CCCCvC.CCCCvC CCCCvv.CCCCvv CCCvv.CCCvv CCvCv.CCvCv CCvCv.CCvCv CCvvvC.CCvvvC CCvvv.CCvvv CvCvv.CvCvv CvvCC.CvvCC n CvvCv.CvvCv Cvvvv.Cvvvv
 vvvvC.vvvvC vvvCv.vvvCv vvvCC.vvvCC vvCvv.vvCCvv vvCvC.vvCvC vvCCv.vvCCv vvCCC.vvCCC
 vvCvv.vvCvv vvCvvC.vvCvv vvCvC.vvCvC vvCvCC.vvCvCC vvCCvC.vvCCvC vvCCCv.vvCCCv vvCCCC.vvCCCC
 vCvvvv.vCvvvv vCvvvC.vCvvvC vCvvCC.vCvvCC vCvCvv.vCvCvv vCCvv.vCCvv vCCCv.vCCCv vCCCC.vCCCC

V-C PALINDROMES/TAUTONYMS

numerical pal.	numerical taut.	num. pal./taut.	balanced
6 letters			total = 81
CvC.CvC	RAP.TOR (35.53)	HEL.PED (25.25)	PIS.TES (44.44)
vCv.vCv	EQU.ITE (43.34)	AQU.OSE (39.39)	APE.ELE (22.22)
8 letters			total = 108
CvvC.CvvC	BOUS.TOUS (57.75)	COUN.TIES (53.53)	REAT.TAIN (44.44)
vCCv.vCCv	ANGU.ILLA (43.34)	ANCI.ENCE(27.27) <i>w2</i>	ASLA.AGTE(33.33) <i>SA</i>
10 letters			total = 135
CCvCC.CCvCC	DRIGH.TFOLK(46.64)	THUMB.STALL (64.64)	PRINT-SHOPS(77.77)
CvCvC.CvCvC	COPEN.HAGEN(53.35)	REHAM.MERED (45.45)	DESIG.NATED (44.44)
vCvCv.vCvCv	ATOME-AHEVI(54.45) <i>Ben</i>	EXARE.OLATE (53.53)	
None CvvvC.CvvvC vCCCv.vCCCv vvCvv.vvCvv			
12 letters			total = 162
CCvvCC.CCvvCC	BLOODS.TREAMS(67.76)	SPEECH-BREAKS(56.56)	
CvCCvC.CvCCvC	LITHOT.HAMNIC (84.48)	CONDIS.CIPLES (64.64)	PARCEL-GILDER (55.55)
None CvvvvC.CvvvvC vvCCvv.vvCCvv vCvvCv.vCvvCv vCCCCv.vCCCCv			SINFUL.NESSES (81.81) <i>w2</i>

LONGER WORDS

Although no thorough search for longer words was undertaken, I could not resist offering a taste of 14-letter examples:

V-C Palindromes

CvCCvCC.CCvCCvC VINBERG.SHALLET (77.77) is an island in Finland

V-C Tautonyms

CCvCvCv.CCvCvCv PHOTOSE.NSITIVE (98.98)

CvCCvCC.CvCCvCC CIRCUMS.TANCING (86.68), COTRANS.PORTING (balanced $189/14 = 13.5$)

CvCCvC.CvCCvC HERNIOG.RAPHIES (76.76) *st*

vCCvCvC.vCCvCvC ANTI-TUB.ERCULAR (87.78), ATRETOC.EPHALUS (82.82) *d-*

V-C Tautonym/Palindrome

CvCvCvC.CvCvCvC SUPERAN.GELICAL (94.49)

EXTRA-SPECIAL WORDS

Whilst searching for constrained words, a number of extra-special words were encountered. I list them here, in no special order:

Some words boast more than 2 of the constraints considered above. PAVO.NIZE embodies 3 constraints. It is a V-C tautonym (CvCv.CvCv), a numerical tautonym (54.54), and a balanced word ($108/8 = 13.5$). SINFUL.NESSES *w2* not only has dual V-C palindromic/tautonymic status (CvCCvC.CvCCvC), it is also a numerical tautonym (81.81) and a balanced word ($162/12 = 13.5$), making it a word with 4 constraints.

SKID.DING is a V-C palindrome (CCvC.CvCC) and a numerical palindrome (43.34). Its antonym, ANTISK.IDDING, is a V-C tautonym (vCCvCC.vCCvCC), and, like its opposite number, a numerical palindrome (74.47).

The words OPER.ATES and OPER.ATOR share the same root but have different endings. Whilst OPER.ATES is a numerical palindrome (54.45), OPER.ATOR is a numerical tautonym (54.54). Both have the tautonymic, alternating, V-C pattern vCvC.vCvC.

The mouthful TARAMA.SALATA not only has a tautonymic V-C pattern (CvCvCv.CvCvCv) but is also a numerical tautonym (54.54). Its usual claim to fame is its monovocalic status with six letters A which alternate singly with single consonants.

DUP.LEX, with its inherent 'double' connotation is, appropriately, both a dual status V-C tautonym/palindrome (CvC.CvC) and a numerical tautonym (41.41).

The 8-letter V-C tautonym ADIN.IDAN (vCvC.vCvC) *w2* is a numerical tautonym (28.28). But its talents do not end there. By moving the final letter N to the beginning, the original word can be read backwards. ADIN.IDAN is also a split-word pair isogram, one each of the same letters appearing in each half of the word in a different order.