

## 6-BY-6 DOUBLE WORD SQUARES

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The November 1975 issue of Word Ways presented a set of 52 7-by-7 word squares that were generated by computer from a list of boldface words from Webster's Collegiate Dictionary (Seventh Edition) plus the appendices of boys' and girls' names. This article reports on the results of a similar computer search for 6-by-6 double word squares.

A double word square is one in which the horizontal words and vertical words are all different from each other. These squares are decidedly more difficult to construct than the corresponding symmetrical squares (i.e., those of the same size). For example, in Language on Vacation (Scribner's, 1965), Dmitri Borgmann cites the double word square to the right as one of the better 6-by-6 double word squares. Although all the words appear in Webster's Second, four (ectene, adiate, pirite, adance) do not appear in the Collegiate, and two others are derived forms not in boldface there.

S	A	P	P	E	R
A	D	I	A	T	E
M	A	R	T	H	A
U	N	I	T	E	R
E	C	T	E	N	E
L	E	E	R	E	D

This article presents a set of 117 6-by-6 double word squares with the words restricted to the above references. No square draws all 12 of its words from Webster's Pocket Dictionary, answering an open question posed by William Sunners in the November 1972 Word Ways. However, several come very close to doing so, lacking only one word (ratton, a dialect version of "rat", or Avesta, the sacred books of Zoroastrianism).

Several of these word squares occur in clusters which are described separately from the main listing. The most notable cluster has seventeen squares which can be divided into two slightly different groups of 12 and 5 squares, respectively:

S	C	H	I	S	+	Replace * with	PA	PI	TA	TA
*	R	*	N	C	E	any of following:	T	T	P	F
R	A	T	T	O	N					
I	N	T	E	N	+	Replace + with	M	T	T	
*	I	E	R	C	E	any of following:	D	D	T	
E	A	R	N	E	R					

S U F I S M	Replace * with	PA PI TA TA TA
* R * N C E	any of following:	T T F P P
R A T T O N		ER ER ER ER TN
I N T E N D		
* I E R C E		
* A * N E R		

Three smaller clusters of five, three and two squares, respectively, are given below:

* A S * E R	Replace * with	C T C T C T C T G S
* U * * L E	any of following:	LCI LCI LNU RTI RTI
U R O P O D		RD ST RD ST ST
T O R P I D		
C R E E S E		
H A * * E N		

D E S P O T	Replace * with	O A A
I N H U M E	any of following:	RM RM NT
S C * R E R		
H A V I N G		
E G E S T A		
D E * * A L		

L A S S O S	Replace * with	C T
E S C A P E	any of following:	D P
C L O * H E		
T O R R I D		
O P I A T E		
R E A * E R		

The remaining 90 squares are given in the list on the next three pages. Six of these squares contain an asterisk representing either of two letters (indicated beneath).

HAMATE	HEGIRA	HOTTER	JIGSAW
ISABEL	EVADER	UREIDE	UNLACE
SPORED	RESENT	MISSIS	STANCE
PIRATE	ENSATE	POTATO	TEDDED
IRIDES	TEETER	ELINOR	UNLAD
DESERT	ORRERY	DESERT	STYLER
KIRSCH	LEAVES	LEPTUS	MISSUS
INHERE	EXTERN	ESSENE	ORPINE
SHINER	DHARMA	SCOTIA	REIVER
MANNED	GAMBIR	SACRAL	UNLIVE
ELOISE	ELAINE	OPIATE	LITTEN
TESTER	RENDER	REDDER	ACHENE
NEWISH	OMAHAS	PARAPH	PARAPH
URANIA	MILIEU	ACACIA	AVULSE
TRIVET	ASTERN	SCIENT	REDDER
LATENT	SHAMAN	SESTET	INDIUM
ETERNE	UNIATE	IDEATE	AGENDA
TARTAR	MACLED	MEDLAR	HEREON
PASSIM	PATTER	PELOPS	PHASIC
ORIODE	EQUATE	ORACLE	LACUNA
TEASER	TUSCHE	TARTAN	AMENDS
AORTAL	RICTAL	ASKANT	NUTLET
SLEETY	ELAINE	TEENER	ELAINE
HERREN	LANCER	ORRERY	TILTER
POSADA	PRIMAL	RABATO	RACISM
TROGON	RECIPE	ELOPER	APOGEE
OOLONG	OTITIS	SULLEN	PENNIA
SIGNAL	SECRET	OLEINE	IRVING
IDEATE	ENLACE	RATTER	SCOTER
SELLER	REELER	BRIERY	TUYERE
RACISM	RADULA	RAFTER	RAGMAN
EVINCE	OSIRIS	ILLITE	EMEUTE
PERSON	ASSESS	CLOTHE	CENTRA
ASCENT	MUTATE	HERBAL	ALTAIR
STUCCO	ERASER	ELAINE	LIENAL
TASTER	RELENT	NESTER	LASTLY
REBATO	ASPIRE	RECAST	*AGMAN
URETER	SERMON	EVENER	ABLATE
BATTEN	TRIPOD	SANDRA	SLOTHS
ASTUTE	REMAKE	ODORED	SESTET
TEENER	ANURIA	RETENE	ESSENE
ORRERY	*ESTER	BREWER	STARER

\* = L, Y

\* = B, G

REGROW	RESORB	RESORB	SABLES
OOOLITE	ELATER	EVENER	CREESH
ACACIA	VIRTUE	SILENI	ORNATE
MENTOR	INDABA	OLEINE	TINNER
ENCASE	LOAVES	RENDER	EVENLY
REELER	ERRANT	TREATY	RETELL

SABLES	SACHEM	SAMARA	SAMBAR
UNRIPE	TYRONE	PREMED	TROUPE
MYELIN	AMANDA	ALNICO	ASTRID
MONICA	CASEIN	READER	TITLED
ENDEAR	TRISTE	ENCODE	ENLACE
DEADLY	EASTER	REELER	DEEPEN

SAMPLE	SARDAR	SCALAR	SCARAB
UVULAR	CLEAVE	THRIVE	TAMARA
RETINA	ALDRED	RIPPED	AMIGOS
FRACAS	REBIND	OLEINE	REDOUT
ESTATE	PLUNGE	VENDUE	CROUSE
REELER	HEDGER	ESTEEM	HALTER

SCARER	SCAREY	SCHEME	SCHIST
POLITE	ORNATE	URANYL	THENCE
LOADED	CONCHA	CORDED	AORTAE
ATTIRE	ISAIAS	CURULE	TUMULT
SIENNA	ASLANT	OSIRIS	ISAIAH
HEDGER	LESLEY	RESENT	CENTRE

SCILLA	SEABED	SEEDER	SEESAW
EOLIAN	EXHALE	POMELO	ENDURE
TALENT	SMILAX	ACETAL	PSYLLA
TRINAL	TOMTIT	DERAIL	TATTER
ESTATE	EOSINE	ENGINE	ETHANE
REELER	TRACER	REELER	TEENER

SLEUTH	SPLINT	STELAR	TAPPET
LONNIE	URANIA	TELOME	HELENE
IRISES	FORCER	IRONIC	ORATOR
DESERT	INDULT	FRINGE	MOTILE
ENLACE	STELLA	LOGION	ABATIS
REELER	MORTON	ERNEST	SENECA

CLOSET	TESTED	SCROTA	VECTOR
RANULA	ONEIDA	MA*LER	INHALE
AMEBAN	MOLTEN	ARGENT	SCORES
SEISIN	CUEING	LEGATE	COSTAE
INDENE	AGNAIL	TEETER	IDEATE
STATE*	THENCE	ORREY	DENNED

\* = D, R

\* = I, U

A D A M I C	B E A C O N	B E A G L E	B E H A L F
T O R U L A	E X H A L E	O X T A I L	U R E D I A
T U R T L E	S P I N E T	W H A M M Y	G R A V E N
A C E T I C	T O M C A T	L A M E N T	L A V E R N
C H A E T A	O S S E T E	E L A T E R	E T E R N E
K E R N E L	W E A R E R	G E N E R A	R A N T E R
C A D D I S	C A E C A L	C A P P E R	C E R I S E
O R I E N T	A D M I R E	E S S E N E	O M E N T A
S L E A V E	L A B R E T	S C Y L L A	W E E D E R
M I S S A L	I G O R O T	T E L I A L	L U C E R N
O N E I D A	P I L U L E	U N L A C E	E T H E N E
S E L L E R	H O I S E D	S T A S E S	D E O D A R
C E S T U S	C H A S E R	C H I E L D	C L O V E R
U M P I R E	O O L I T E	H I N D O O	R A V I N E
S P I R A L	W R I G H T	R A D I U S	O M E N T A
P I R A T E	M A G N E T	O T I T I S	N E R E I D
I R I D I C	A C H E N E	M U C O S A	U N L A C E
D E T E C T	N E T T E D	A S T R A L	S T Y L E R
C R A S I S	C U P P E R	D A D O E S	D A R R E L
R E C E N T	U N I A T E	A R A B L E	U R E A S E
E N C A S E	S L O T H S	M E R L I N	R E M I S S
D E R M A L	S A L I N E	M O N I C A	H O U S E S
I G U A N A	E D E N I C	E L E G I T	A L D I N E
T E E N E R	D E T E C T	D E L E T E	M E A N E R
D I S B A R	E C L A I R	E N C A M P	E P H E B E
I N T I M A	R O U B L E	R O O T E R	U R E T E R
S T A T O R	A R N O L D	O V E R D O	R I C H E N
C E N T R E	S P A R I D	T E R E U S	O C T A V E
U N C I A L	E S T A T E	I N C U S E	P E O N E S
S T E E L Y	R E E L E R	C A E S A R	A R R E S T
E P H E B I	E S C H A R	F A L T E R	F I S C A L
S A A N E N	S L E E V E	O R I O L E	U N T U N E
C R I S E S	T E R R E T	R E G I O N	S C O R E S
A R R I V E	R A T I N E	M O U L I N	S O L U M S
P E E L E R	U V E O U S	A L L E G E	E M I L I E
E L D E S T	S E S T E T	L E A R N T	R E D E A R
A P L I T E	G A F F E R	A P L I T E	G A M M E D
U R A N I A	A R L E N E	U R E M I A	A R I O S O
T O R T E S	S P U R G E	T * P P E R	S C A N T Y
I N V E R T	S E R I A L	I N T E R N	S A M I E L
S T A N C E	E N R A G E	S C O N C E	E N I S L E
M O L * E R	S T Y L E R	M E N D E R	R A S H L Y

\* = D, T

\* = A, I