

# GENERIC EDGES

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The letters of a word can be displayed as one of a number of different geometrical forms - a triangle, pentagon or rhombus etc. - in the order in which they occur in the word. In *Edge Words* (WW98274), I arranged the letters of words thus, in order to create 'edge words', words made by the letters along the left (L) and right (R) hand edges of the particular geometrical form, reading from the top downwards. More recently, in *Upwards Edge Words* (WW2006235) I repeated the exercise to find edge words which read upwards.

Now I am searching for L and R edge words which are generically related. The two words may be identical, they may be transposals, palindromes, tautonyms or Miami words (see *Miami Words* (2000014)).

The search is confined to the **10-letter triangle**, **8-letter pentagon** and **9-letter rhombus**.

dn. = downward edge word    up = upward edge word

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

Other references: *Pcon* = The Palindromicon 11, Word Ways Monograph Series 6, 2002;

*Web2* and *Web3* = Webster's Second and Third Editions.

Locations, identified by country, are taken from The United States Board on Geographic Names.

## IDENTICAL EDGES

To these particular triangles, pentagons and rhombuses with identical edges, I have added the constraint that the edge word must be a *reversal*. Where the reversals are both locations, I have selected examples in which both locations can be found in the same country. The edge words may contain a repeated letter\*.

### 1. TRIANGLES

For an A - Z of 6-letter triangles with identical L and R edge words which read downwards, the reader is referred to *Edge Words* (page 279).

10-letter triangles with identical L and R  
 edge words have the letter pattern  
 1223?34??4

arrivistes  
 A  
 R R  
 I V I  
 S T E S

dn: aris (arise)  
 up: Sira (a surname)

Esselenian\*  
 (Web2)  
 E  
 S S  
 E L E  
 N I A N

esen (pl. of 'ease')  
 nese (nose)

1  
 2 2  
 3 ? 3  
 4 ? ? 4

imminishes\*  
 (diminishes)  
 I  
 M M  
 I N I  
 S H E S

imis (imi = a liquid measure)  
 simi (a type of knife)

seerpreese\*  
 (surprise)  
 S  
 E E  
 R P R  
 E E S E

sere  
 eres (ears)

## 2. PENTAGONS

8-letter pentagons with identical L and R edge words have the letter pattern 1223?344.

attaball\*  
 A  
 T T  
 A B A  
 L L

dn: Atal (Chile)  
 up: lata (religious hysteria in Java)

Coolaloo\*  
 (Australia)  
 C  
 O O  
 L A L  
 O O

Colo (Philippines)  
 Oloc (Philippines)

1  
 2 2  
 3 ? 3  
 4 4

apperell  
 (apparel)  
 A  
 P P  
 E R E  
 L L

apel (apple)  
 lepa (*Web2*)

Doornraa  
 (South Africa)  
 D  
 O O  
 R N R  
 A A

Dora (India)  
 Arod (India)

## 3. RHOMBUSES

9-letter rhombuses with identical L and R edge words have the letter pattern 1223?3445.

Moorgreen  
 (in Nottinghamshire, UK)  
 M  
 O O  
 R G R  
 E E  
 N

dn: moren (morn)  
 up: Nerom (Belgium)

Meerbrook  
 (in Staffordshire, UK)  
 M  
 E E  
 R B R  
 O O  
 K

Merok (Hungary)  
 Korem (Hungary)

1  
 2 2  
 3 ? 3  
 4 4  
 5

Woolplaas  
 (Namibia)  
 W  
 O O  
 L P L  
 A A  
 S

Wolas (Afghanistan)  
 Salow (Afghanistan)

Allagappa\*  
 (Burma)  
 A  
 L L  
 A G A  
 P P  
 A

Alapa (Nigeria)  
 Apala (Nigeria)

## TRANSPOSAL EDGES

Edge words which are transposals may read downwards and/or upwards.

### *Both edge words read downwards*

#### 1. TRIANGLES

If the letters of the L edge word read downwards 1234 (see Triangles above), the transposed letters of the R edge word conform to one of 5 permutations (the initial letter being predetermined). These are 1243, 1324, 1342, 1423 and 1432. Below, SHEEPHERDE and TREE-FEEDER each cater for 2 of the 5 permutations instead of just one. This is because their edge words each contain a repeated letter\* (E). Note that the L and R edge words of MOORKEEPER are synonymic transposals.

moorkeeper  
 M  
 O O  
 R K E  
 E P E R  
 L. more 1234  
 R. moer (more) 1243

palliasses  
 P  
 A L  
 L S I A  
 S S E S  
 pals 1234  
 plas (place) 1324

sheepherde\*  
 S  
 H E  
 E P H  
 E R D E  
 shee (see) 1234  
 sehe (she) 1423  
 and 1324

tree-feeder\*  
 T  
 R E  
 E F E  
 E D E R  
 tree 1234  
 teer (to plaster) 1342  
 and 1432

## 2. PENTAGONS

The above 5 permutations also apply to the 4-letter edge words of 8-letter pentagons (see Pentagons above).

<p>peetweet* (spotted sandpiper bird)</p> <pre> P E   E T   W   E E   T </pre> <p>L. Pete 1234 R. peet 1243 and 1423</p>	<p>carryall (a one horse carriage)</p> <pre> C A   R R   Y   A L   L </pre> <p>Carl 1234 cral 1324 (kral, <i>Web2</i>)</p>	<p>preemeer* (premiere)</p> <pre> P R   E E   M   E E   R </pre> <p>pree (a taste) 1234 peer 1342 and 1432</p>	<p>semi-time</p> <pre> S E   M I   T   I M   E </pre> <p>seim (seem) 1234 smie (smy, a fish) 1432</p>
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## 3. RHOMBUSES

If the letters of the L edge word read downwards 12345 (see Rhombuses above), the transposed letters of the R edge word conform to one of 5 permutations (both the initial letter and the last letter being predetermined). These are 12435, 13245, 13425, 14235 and 14325. Three of the four sets of edge words below have a repeated letter\* and so cater for more than one permutation.

Note that the L and R edge words of PEETWEETS are synonymic transposals.

<p>peetweets*</p> <pre> P E   E T   W   E E   T S </pre> <p>L. petes (peats) 12345 R. peets (peats) 12435 and 14235</p>	<p>palliase</p> <pre> P A   L L   I   A S   S E </pre> <p>palse (palsy) 12345 plase (place) 13245</p>	<p>Breemeers* (Belgium)</p> <pre> B R   E E   M   E E   R S </pre> <p>brees (eye-lids) 12345 beers 13425 and 14325</p>	<p>torotoros* (kingfishers, <i>Web2</i>)</p> <pre> T O   R O   T   O R   O S </pre> <p>toors (tors) 12345 troos (trusts v.) 14235 and 14325</p>
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### *Both edge words read upwards*

#### 1. TRIANGLES

If the letters of the L edge word read upwards 4321 (see Triangles above), the transposed letters of the R edge word conform to one of 5 permutations (the last letter being predetermined). These are 4231, 3421, 3241, 2431 and 2341.

<p>bullrushes</p> <pre> B U   L L   R   U S   H   E   S </pre> <p>L. slub 4321 R. Sulb (Austria) 4231</p>	<p>lead-headed</p> <pre> L E   A D   H   E D   E   D </pre> <p>adel (addle) 4321 deal 3241</p>	<p>reed-roofed</p> <pre> R E   E D   R   O O   F   E   D </pre> <p>oder (other) 4321 doer 3421</p>	<p>tree-feeder*</p> <pre> T R   E E   F   E E   D   E   R </pre> <p>Eert (S. Africa) 4321 reet (right a.) 2431 and 2341</p>
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## 2. PENTAGONS

The above 5 permutations also apply to the 4-letter upwards edge words of 8-letter pentagons.

fellness F E L L N E S S	reed-seed* R E E D S E E D	igniting I G N I T I N G
L. Slef (Algeria) 4321	eder (ivy) 4321	Nigi (Liberia) 4321
R. self 4231	deer 3421 and 3241	Gini (Chad) 2341

## 3. RHOMBUSES

If the letters of the L edge word read upwards 54321 (see Rhombuses above), the transposed letters of the R edge word conform to one of 5 permutations (both the last letter and the initial letter being predetermined). These are 54231, 53421, 53241, 52431 and 52341.

Smeermaas (Belgium) S M E E R M A A S	Suurpoort (South Africa) S U U R P O O R T	Salatalab* (Iran) S A L A T A L A B
L. saems (seams) 54321	torus 54321	Blaas (S. Africa) 54321
R. sames 54231	trous 53421	Baals (Greenland) 53241 and 52341

## PALINDROMIC EDGES

### 1. TRIANGLES

10-letter triangles with palindromic edges have the letter pattern 1232?31??1. BARAARBOOB (Somalia) is the only example I found. It is imperfect as BRRB is not a word. On the other hand, with the basal palindromic BOOB, all 3 edges are palindromic. BAAB is a surname.

	1			B
	2	3		A R
2	?	3		A A R
1	?	?	1	B O O B

### 2. PENTAGONS

8-letter pentagons with palindromic edges have the letter pattern 1232?311. Can you find one?

### 3. RHOMBUSES

The word which makes two palindromic edge words may, or may not, be a palindrome itself. When it is a palindrome, the two edge words are identical (a and b - pattern 1223?3221). When it is non-palindromic, the identical second and fourth letters of the L edge word may be the same as those of the R edge words (c - pattern 122???221) or different (d - pattern 123???231).

<p>(a) Ellemelle (PCon) E L L E M E L L E L. Elele (Nigeria) R. Elele (Kenya)</p>	<p>(b) Arrawarra (Suriname) A R R A W A R R A Arara (Brazil) Arara (Ethiopia)</p>	<p>(c) suumptuus S U U M P T U U S sumus (Web3) sutus (Web3)</p>	<p>(d) diaboliad D I A B O L I A D Dibid (Kenya) Dalad (Somalia)</p>
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**TAUTONYMIC EDGES**

**1. TRIANGLES**

10-letter triangles with tautonymic edges have the letter pattern 1231?12??3. When the 2nd and 7th letters (2) are the same as the 3rd and 10th letters (3), the tautonymic edge words are identical\*.

Note that, in the second example below, all three locations can be found in the same country.

<p>Niininiemi* (Finland) N I I N I N I E M I L. Nini (Iran) R. Nini (Algeria)</p>	<p>Nianiniara (Burkina Faso) N I A N I N I A R A Nini (Burkina Faso) Nana (Burkina Faso)</p>	<p>Chacachana (Angola) C H A C A C H A N A Chch (Pakistan) Caca (Angola)</p>
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**2. PENTAGONS**

8-letter pentagons with tautonymic edges have the letter pattern 1231?123. No identical-edged examples were found.

<p>erne-fern E R N E F E R N L.dn. erer R.dn. enen L.up rere R.up nene</p>	<p>ingiving I N G I V I N G Inin (Ethiopia) Igig (Morocco) Nini Gigi</p>	<p>Ainauain (East Timor) A I N A U A I N Aiai (Mozambique) anan Iaia (Mozambique) nana</p>	<p>Arhajarh (Mali) A R H A J A R H arar (a tree) ah-ah rara haha</p>
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**3. RHOMBUSES**

With 5 letters, the edge words of rhombuses cannot be tautonyms.

## MIAMI EDGES

Of our three forms only the 9-letter rhombus, with its 5-letter edges, is capable of making Miami edge words (pattern 12?12). In order to make these Miami edges, the 9-letter word must have the letter pattern 122???112. Hence, all the edge words have 2 repeated letters.

erranteer E R R A N T E E R L. up reare R. up retre	Alluviaal (South Africa) A L L U V I A A L L. up Laula (Zambia) R. up Laila (girl's name)	Enniskeen (Ireland) E N N I S K E E N L. up keine (nine) R. dn. Enken (Russia)	Needwonne (undersea feature) N E E D W O N N E L. up enden (end) R. dn. Neone (Angola)
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## MIXED EDGES

Examples in which one edge word is a palindrome and the other edge word a tautonym can be found amongst 10-letter triangles and 8-letter pentagons. In those below, the L edge word is the tautonym - triangle pattern 1231?32??1 and pentagon pattern 1231?321.

### 1. TRIANGLES

Aksayskaya (Russia) A K S A Y S K A Y A L. dn. Akak (Cameroon) L. up Kaka (Cameroon) R. Assa (Cameroon)	Alealelena (Solomon Is.) A L E A L E L E N A L. dn. Alal (India) L. up Lala (India) R. Aeea (an inundated islet)	Astal'tseva (Russia) A S T A L T S E V A L. dn. Asas (Eritrea) L. up Sasa (Eritrea; plant genus) R. Atta ( <i>Web3</i> )
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### 2. PENTAGONS

shastahs (shastras) S H A S T A H S L. dn sh-sh R. Saas (Switzerland)	tootmoot (mutter <i>Web2</i> ) T O O T M O O T L. dn. toto R. toot	Saassaas (Saassaa - in Israel and in Syria) S A A S S A A S L. dn. Sasa (Iraq; plant genus) L. up Asas (Iraq) R. Saas (Germany)
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*Finally, here is something to make your hair stand on end. In this triangle with transposal edges, the 2 downward-reading edge words describe the triangle word!*

hair-raiser				
	H			
	A		I	
	R	R	A	
I	S	E	R	
	hari (hairy)		1234	
	hiar (higher)		1423	