# COMMON 4x4 WORDSQUARES 

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In a companion article, the editor estimates the number of $m$ letter words to be drawn at random from the dictionary in order to have a reasonable expectation of forming an mxm word square. This is a task admirably suited to the computer, which can take a list of words and check all possible combinations for potential squares. To show what can be done, l took the 298 four-letter words in my spell checker and formed a total of $1534 \times 4$ word squares, somewhat more than the editor's prediction of 67 . (The editor suggests that the support should be only 84 , not the 104 calculated in his article.) ln a similar effort, the computer was unable to form a $5 \times 5$ word square using 320 words from my spell

[^0]away were area year away wire area year ball area lead lady ball area left late ball area less last base area sets east base area sets easy
base away sale eyes base away same eyes base away save eyes bill idea lead lady bill idea left late bill idea less last call area lead lady
call area left late call area less last came away made eyes came away make eyes card area rent data card area rent date card area rest data
card area rest date
care away race eyes
care away rate eyes
cars area real sale case area sets east
case area sets easy
case away sale eyes
case away same eyes
case away save eyes
cash area seen hand
cash area sell half
cash area sell hall
date away take eyes
east area seek take
east area sell talk
face away came eyes
face away care eyes
face away case eyes
fact away camp type
fall area lead lady
fall area left late
fall area less last
farm area read made
fast area seek take
fast area sell talk
file idea less east
file idea less easy
fill idea lead lady
fill idea left late
fill idea less last
film idea lead made
film idea less mass find idea near dark find idea next data find idea next date fine idea news east fine idea news easy firm idea read made game away made eyes game away make eyes girl idea read lady girl idea rent late girl idea rest late half area less fast hall area lead lady hall area left late
hall area less last hand area near dark hand area next data hand area next date hard area rent data hard area rent date hard area rest data hard area rest date kind idea near dark kind idea next data kind idea next date know nine once week know none once week land area near dark land area next data land area next date last area seek take last area sell talk late away take eyes laws area well sale life idea fees east life idea fees easy line idea news east line idea news easy list idea seek take list idea sell talk made away date eyes mass area seem same mass area sell sale mind idea near dark mind idea next data mind idea next date miss idea seem same miss idea sell sale name away made eyes name away make eyes nine idea news east nine idea news easy page away game eyes page away gave eyes part area real talk pass area seem same past area seek take past area seek take past area sell talk
plus line unit sets race away came eyes race away care eyes race away case eyes rate away take eyes sale area less east sale area less easy sale away late eyes same away made eyes same away make eyes show have over were show hope open went stay tire area year than here area near that here area team that here arms test thus here urge seek thus here urge seem thus here urge seen thus hope upon send thus hope upon sent used sale else deep used side edge deep wage away game eyes wage away gave eyes wall area lead lady wall area left late wall area less last want area neck take what here area team what here arms test wife idea fees east wife idea fees easy will idea lead lady will idea left late will idea less last wine idea news east wine idea news easy wish idea seen hand wish idea sell half wish idea sell hall wish into step hope wish into stop hope with idea tell half with idea tell hall


[^0]:    able also area arms army away Dack ball bank base been best bill olue boat body bond book both boys call came camp card care cars case cash cent city club code cold come copy cost dark data date days dead deal deep desk died does dogs done door down drop duty each east easy edge else even ever eyes face fact fair fall farm fast fear feel fees feet fell felc file fill film find fine fire firm five food foot form four free from full fund game gave girl give glad goes gone good gray hair half hall hand hard have head hear heat held hell help here high hold home hope hour idea inch into item jack jazz jobs John join June just keep kept kind king knew know lack lady laid land last late laws lead left less life like line lips list live loan long look lord loss lost lots love made mail main make many Mary mass mean meet Mike mind miss more most move much must name near neck need news next nice nine none note once only open over page paid pain park part pass past pays pipe plan play plus poet pool poor post race rate read real rent rest risk road role room said sale same save says seek seem seen self sell send sent sets ship shop show side sign size sold some soon sort stay step stop such sure take talk team tell term test than that them then they thin this thus time tire told tone took town trip true turn type unit upon urge used very vice view vote wage wait wall want ways week well went were west what when whom wide wife will wine wire wish with word work year York your

