The article presents a study of letter-sound correspondences in Danish orthography. A total of 565 letter-sound correspondence types were needed to align letters and sounds in a list of more than 47,000 Danish word forms. Seven principles of letter-sound alignment are formulated and discussed. The word list included nearly all word forms with one or two syllables which occur in Den Danske Ordbog or can be derived from occurring words by inflection. Two thirds of the letter-sound correspondence types were “complex”, meaning that they related a string of letters to a single sound, or (less commonly) a string of sounds to a single letter. Complex correspondences are clearly a challenge to learners of Danish orthography. However, Danish orthography is still dominated by simple correspondence, as more than 50 % of the word forms consisted entirely of simple correspondences in which a single letter is related to a single sound.