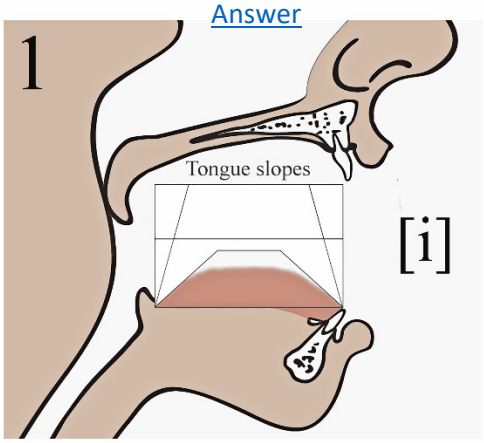
Tongue Slope Worksheet

Front Vowels | Back Vowels | Central Vowels

Answer

1



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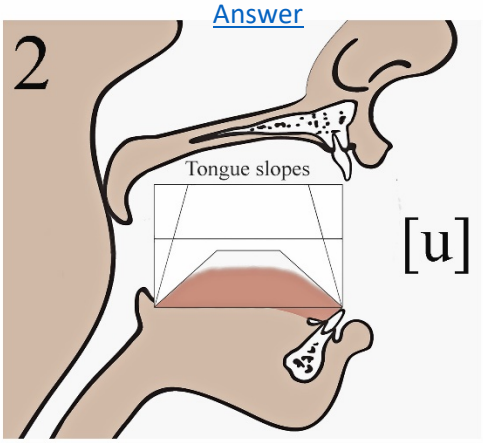

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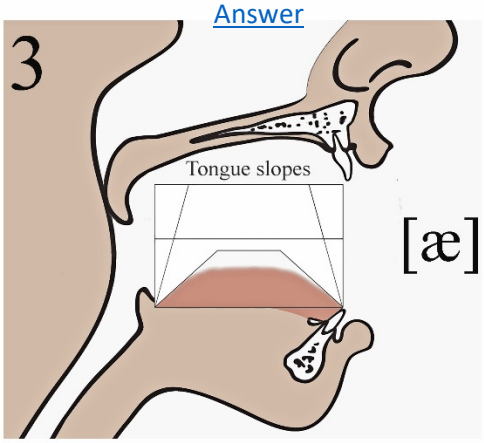

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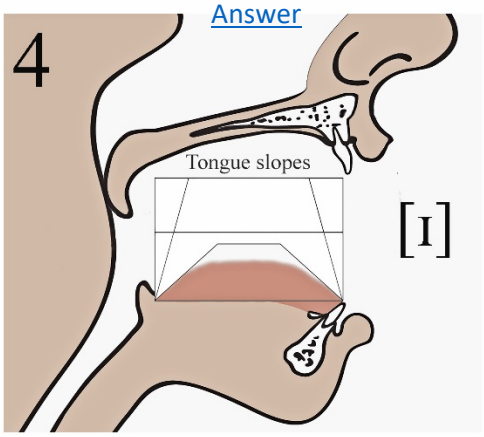

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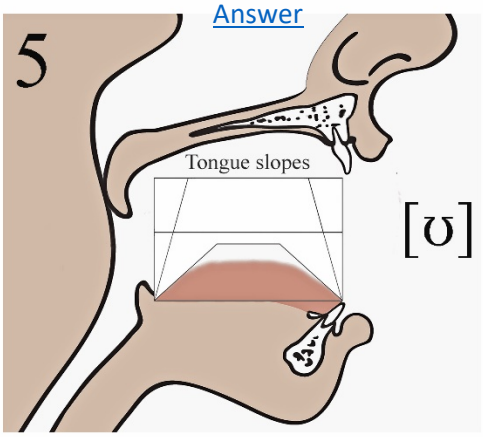

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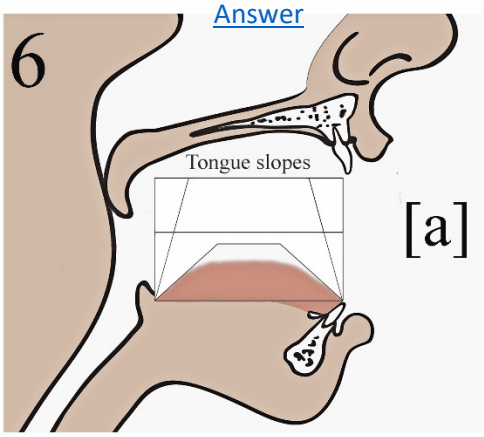

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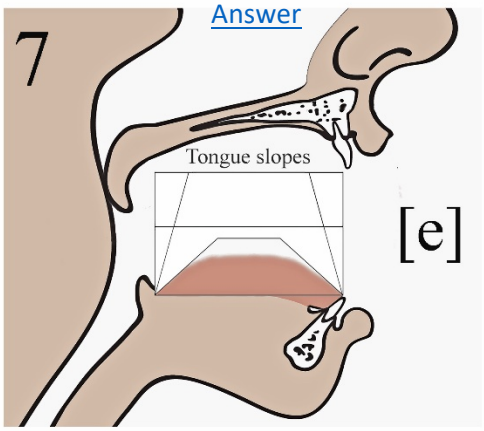

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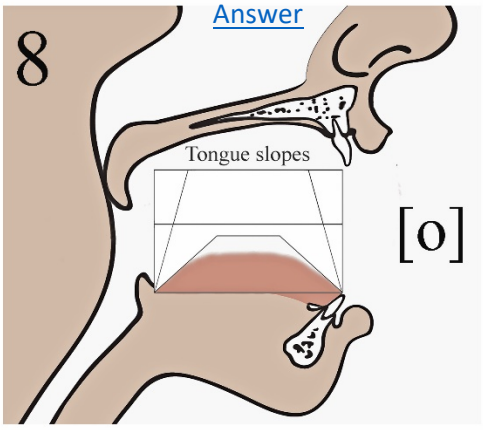

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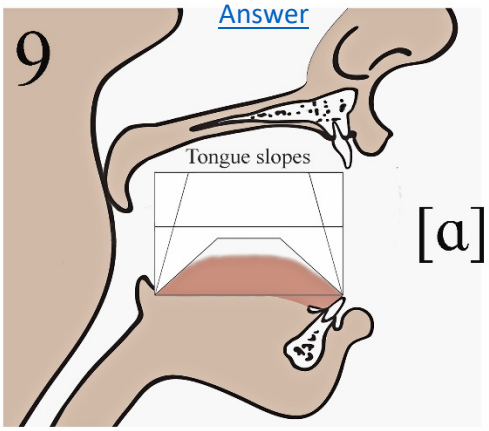

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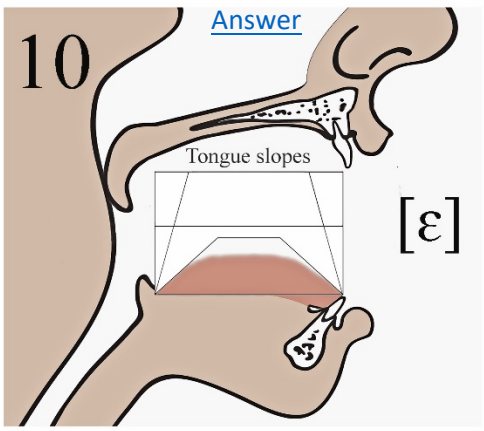

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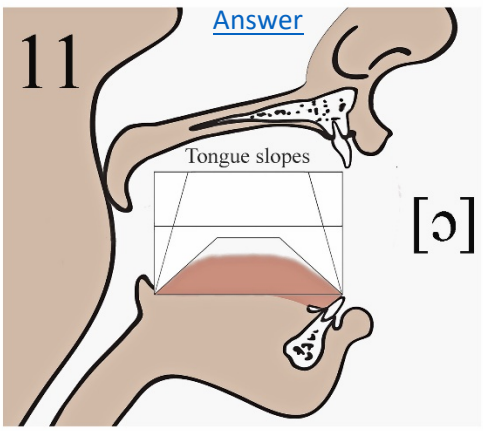

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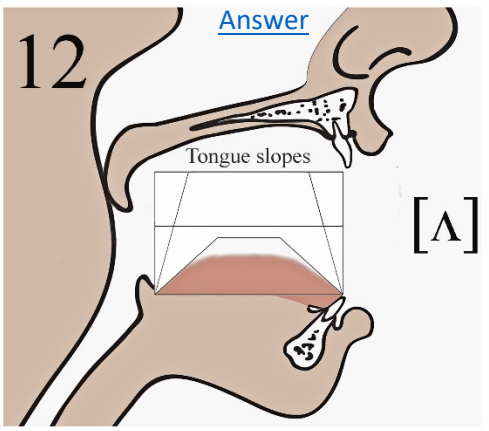


Vowel Chart for Lyric Diction

Peak of Arch / Slope	Front	Rounded Front	Back with lip rounding
Steep			
Closed	[i]	[y]	[u]
Open	[ɪ]	[ʏ]	[ʊ]
Moderate			
Closed	[e]	[ø]	[o]
Open	[ɛ]	[œ]	[ɔ]
Mild	**Central**		
Open	[æ]		[ɒ]
Open	[a]		[ɑ]
Flat Open	[ʌ]		

The color coding system of ski slopes is used to define the angle of the tongue:
Vowels with a steep tongue arch are black ([i/u]).
Vowels with a moderately steep tongue arch are blue ([e/o]).
Vowels with a mildly sloped tongue arch are green ([a/ɑ]).
The vowel with a flat tongue position is pink ([ʌ]).

Point 5. Different IPA symbols are used for lyric diction. Symbols that represent spoken pronunciation are dropped: uvular [ʁ] and the *r*-colored [ɚ], [ɝ], and [ɐ] vowels. Sustaining an *r*-colored vowel in an unstressed syllable is undesirable for singing.

Many sounds have not been identified by the International Phonetic Association. Symbols that indicate specified sounds are needed. For example, the *les, ses, mes* words in French are not transcribed with consistency in the dictionary. Some dictionaries transcribe them with a closed [e] while others indicate an open [ɛ]. They are neither. They are pronounced with a sound that is between [e] and [ɛ]. The pronunciation shifts toward a more closed [e] (although not tightly closed) when followed by a word with an [e], [i], or [y] in the first syllable. The pronunciation shifts toward a more open [ɛ] (although not wide open) in all other cases: *Et ces étoiles sont tes yeux* [e s(e)z etwalə sõ tɛz jø]. Thomas Grubb recommends placing the transformed vowel of words with vocalic harmonization in parentheses.[8] The vowel in parentheses indicates a sound that is between [e] and [ɛ] but closer to [e]. This author uses an [ɐ] symbol to indicate a sound that is between [e] and [ɛ] but closer to [ɛ]. The order from closed to open is: [e] [(e)] [ɐ] [ɛ]. These distinctions would be helpful for students who struggle to replicate the Italian closed [e] vowel. The Italian [e] is quite open compared to the German and French pronunciation of the same symbol. The Italian [e] is closer in sound to the French [ɐ] described above.

A symbol that represents a sound between [i] and [ɪ] is needed for German and English. German words that are unstressed within the phrase are pronounced with an open [ɪ]: *bin, in, bis, hin, im, mit*. The pronunciation shifts toward a more closed [i] (although not tightly closed) for words that are stressed within the phrase: *nicht* [nɨçt], *ich* [ɨç], *singen* ['zɨŋən]. An [ɨ] symbol is used here to indicate a sound that is between [i] and [ɪ]. English words with an [i] sound in unstressed syllables are pronounced with a sound that is between [i] and [ɪ] for lyric diction. Reasoning: a tightly closed [i] sound calls undue attention to unstressed syllables. Examples: *lilies* ['lɪlɨz], *honey* ['hʌnɨ], *pitied* ['pɪtɨd].

Symbols that indicate specified German consonant sounds are needed. For example, apocopated words with final *b, d, g,* are neither fully voiced nor fully aspirate when followed by an initial vowel word. The pronunciation shifts toward a more voiced articulation (although not fully voiced) when an apocopated word is followed by a word that begins with a vowel: *hab' ich* [hɑːp(b) ɪç], *send' es* [zɛnt(d) ɛs], *Mein Aug' ist blau* [maen ʔɑok(g) ɪst blɑo]. New indications are needed to define the degree of voicing for final *b, d,* and *g* of apocopated words.

Point 6. Standard lyric diction textbook authorities do not recognize a close-mid or open-mid vowel category. As a result, vowels are classified in a different way for lyric diction and transcription purposes. The IPA was created by linguists and intended for speech. Singers adopted the IPA for lyric diction. In speech, the lips are spread for front vowels and the tongue does not remain in contact with the lower front teeth for back vowels. Retracting the tongue and spreading the lips are not recommended for singing. These differences affect how vowels are classified for lyric diction. Adjustments to the vowel chart are needed.

Phoneticians classify vowels according to speech formation. The articulators are in close proximity for speech (tongue slope is imperceptible). When slope of the tongue is not apparent, tongue height becomes the most obvious landmark feature. As a result, the official vowel chart indicates numerous tongue heights: close, close-mid, open-mid, and open (Figure 1).[9] Companion vowels are not distinguished: [i] and [ɪ] are both classified as close front vowels, [u] and [ʊ] are both classified as close back vowels, and [y] and [ʏ] are both classified as close mixed vowels. Standard lyric diction textbook authorities make a distinction between the vowel pairs by classifying [i], [u], and [y] as closed; and [ɪ], [ʊ], and [ʏ] as open. Bernac, Grubb, Odom, and Colorni do not acknowledge a close-mid or open-mid category. Marshall does not address tongue height.

The Figure 2 chart is designed for lyric diction. Two tongue heights are indicated: open and closed. A new category is added to describe slope of the tongue. Tongue slope is more apparent in the released jaw position required for singing. The slope or angle of the tongue may be compared to the pitch of a roof. A roof can be steep, moderately steep, mildly sloping, or flat. The tongue creates front and back slopes of varying degrees when forming vowels. The varying degrees of sloping change the shape of the vocal tract (resonating chamber). These formations distinguish one vowel from

another. The slope (or angle) of the tongue gives vowels their unique color.

Steep vowels have a sharply sloped tongue position. The [i] and [ɪ] vowels have a steep slope, the [e] and [ɛ] vowels have a *moderate* slope, and the [æ] and [a] vowels have a *mild* sloping of the tongue toward the front of the mouth. The [u] and [ʊ] vowels have a *steep* slope, the [o] and [ɔ] vowels have a *moderate* slope, and the [ɒ] and [ɑ] vowels have a *mild* sloping of the tongue toward the back of the mouth. The [ʌ] vowel has no perceivable arch of the tongue. The tongue at rest and the [ʌ] formation are identical (Figure 3).

The *central* vowel category refers to the mild and non-sloped vowels: [ʌ], [ɑ], [a], and [æ]. *Central* vowel is used in favor of *low* vowel. Wording that might suggest a low pitch or placement should be avoided for lyric diction. The International Phonetic Association classifies [ʌ] and [ɑ] as back vowels and [a] and [æ] as front vowels. The tongue arch for central vowels is indistinguishable in the space required for singing. Central vowels are clarified by means of focus rather than formation for singing.[10] A central classification also agrees with transcription rules. Take the German ich-Laut rules, for example. The transcription of *ch* is dictated by the tongue position of the preceding vowel or consonant. If [a] were truly a front vowel, we would articulate *ach* as [aç] instead of [aχ]. Standard lyric diction textbook authorities are reluctant to assign a front or back designation to the [a] and [ɑ] vowels. These vowels are typically referred to as bright [a] and dark [ɑ].

The Whisper Test. The tongue slope category may be tested by whispering the closed and open vowel pairs. Note that the tongue, as a group of eight muscles, is capable of maintaining a precise slope while the oral space is altered. The oral space may be increased by lifting the palate, lowering the jaw, or by forming a plateau in the middle of the tongue. Here is the process for testing the veracity of the tongue slope category.

1. Whisper an [i] vowel using the singer's formation. The [i] for singing is formed with a forward arch of the tongue (*not* by spreading the lips). The sides of the tongue contact the length of the upper molars.
2. Carefully maintain the [i] tongue formation while lowering the jaw.
3. Produce a whispered sound with this formation. An [ɪ] result would prove that closed and open vowel

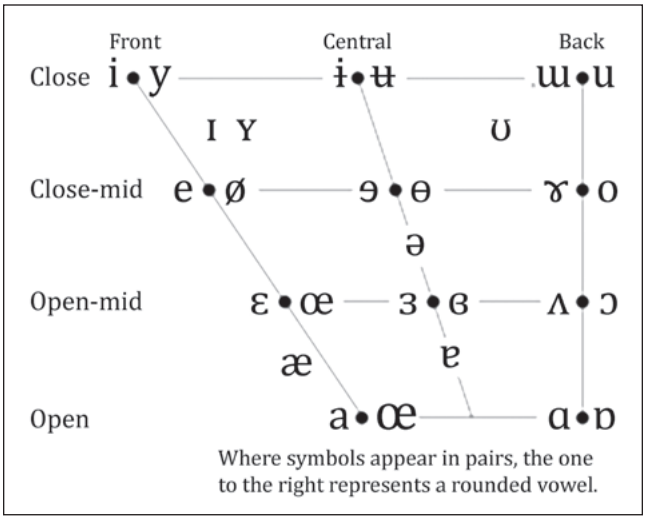
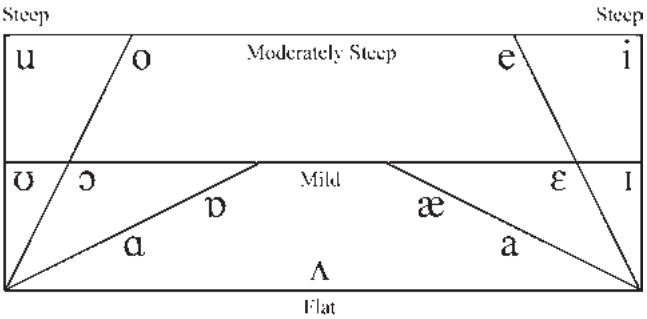


Figure 1.

Peak of Arch / Slope	Front	Rounded Front	Back
Steep			
Closed	i	y	u
Open	ɪ	ʏ	ʊ
Moderate			
Closed	e	ø	o
Open	ɛ	œ	ɔ
Mild		**Central**	
Open	æ		ɒ
Open	a		ɑ
Flat			
Open		ʌ	

Figure 2.



Back vowels are to the left of the chart, front vowels are to the right, central vowels are in the center, closed vowels are in the upper section, open vowels are in the lower section.

Figure 3.

pairs share the same tongue slope. *Space* is the distinguishing factor.

4. Replicate the exercise with the remaining vowel pairs: closed [e] < open [ɛ], closed [u] < open [ʊ], closed [o] < open [ɔ], closed [y] < open [ʏ], closed [ø] < open [œ].

Did the International Phonetic Association attempt to classify the schwa? Yes, it did! The schwa represents an undefined sound in an unstressed syllable. It should not be classified since it does not indicate a specific vowel sound. The International Phonetic Association classifies the schwa as a mid-central vowel. Their classification implies that the schwa has the same pronunciation in all languages. This does not leave room for the various pronunciations of schwa. English has seven pronunciations, German has two, and the French pronunciation of schwa varies in speech (it is consistently pronounced as an [œ] vowel for singing).[11] This is a concern for singers since the schwa must be sustained.

Finally, the International Phonetic Association organizes vowels on a side view of the tongue. The tongue is a group of eight muscles capable of an infinite number of formations. The side view would have to accommodate at least seven angles for lyric diction (Figures 3 and 4). If the official vowel chart were an effective model for charting symbols, then consonants would be charted in the same manner. Consonants are organized by category on a graph. If vowels were organized on a graph, additional details could be included.

Point 7. Listening to recordings of performances by native classically trained singers is a vital part of the lyric diction course. This is necessary when discussing performance practice and trends. Listening in a language course is centered around speech. The following examples demonstrate the need for informed critical listening as offered in a lyric diction course.

- *English.* Dialect is imperceptible in fine singing. Discussions in a language class are based on speech patterns. Dialect is the source of much confusion in the English lyric diction classroom. Students often state, "But I don't say it that way." This observation suggests that singers expect lyric diction to feel "natural." Singing formations may not feel "natural" especially when spoken practice provides the standard for what is considered "normal." English lyric diction rules offer a pronunciation that is best for singing. Lyric diction should not reflect speech formation or regional dialects. These points are successfully addressed through the informed critique of performances by classically trained singers. A diction course with listening helps the instructor persuade students to adopt a pronunciation that is dialect free and favorable for singing.
- *Italian.* Recordings from the mid to late 1900s reflect an era in which unstressed *e* and *o* were considered open. This trend was reinforced in *Singer's Italian* by Evelina Colorni. She had solid arguments for endorsing the performance practice of her day. Her open vowel rules accommodated the singer's need for increased space. She pointed out that her recommendations were not in agreement with dictionary transcription.[12] While Colorni continues to be the authority for Italian diction, her rules for unstressed *e* and *o* are not observed in today's Italian and American opera houses. A closed transcription of unstressed *e* and *o* is a return to authenticity. Recordings from the early 1900s reflect the practice of closing unstressed *e* and *o*. The lyric diction course addresses trends in sung pronunciation. These discussions must include listening examples in order to observe and substantiate performance practice.
- *German.* Lengthening a double consonant is nonexistent in speech. Double consonants of specified words

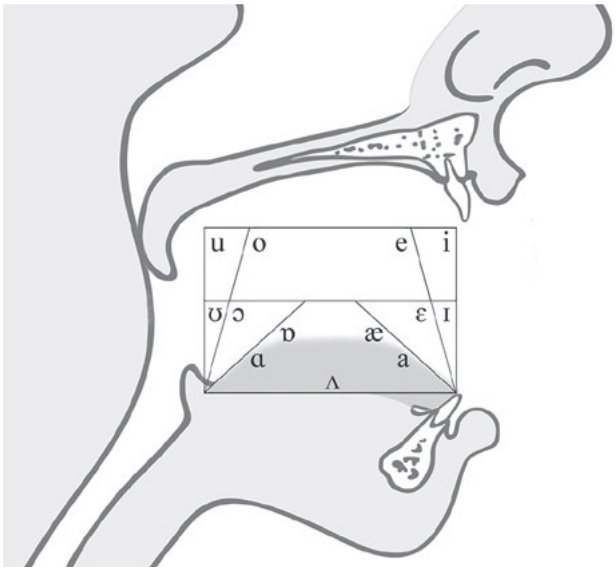


Figure 4.