VISUAL DISORDERS

CHILDHOOD PRIOR RULES	CHILDHOOD FINAL RULES
102.00 SPECIAL SENSES AND SPEECH A. *Visual impairments in children.* Impairment of visual acuity should be determined with use of the standard Snellen test chart. Where this cannot be used, as in very young children, a complete description of the findings should be provided, using other appropriate methods of examination, along with a description of the techniques used for determining the visual acuity for distance. The *accommodative reflex* is generally not present in children under 6 months of age. In premature infants, it may not be present until 6 months plus the number of months the child is premature. Therefore absence of accommodative reflex will be considered as indicating a visual impairment only in children above this age (6 months). Documentation of a visual disorder must include description of the ocular pathology.	102.00 SPECIAL SENSES AND SPEECH A. How do we evaluate visual disorders? 1. What are visual disorders? Visual disorders are abnormalities of the eye, the optic nerve, the optic tracts, or the brain that may cause a loss of visual acuity or visual fields. A loss of visual acuity limits your ability to distinguish detail, read, do fine work, or perform other age-appropriate activities. A loss of visual fields limits your ability to perceive visual stimuli in the peripheral extent of vision. 2. How do we define statutory blindness? Statutory blindness is blindness as defined in sections 216(i)(1) and 1614(a)(2) of the Social Security Act (the Act). The Act defines blindness as visual acuity of 20/200 or less in the better eye with the use of a correcting lens. We use your best-corrected visual acuity for distance in the better eye when we determine if this definition is met. The Act also provides that an eye that has a visual field limitation such that the widest diameter of the visual field subtends an angle no greater than 20 degrees is considered as having visual acuity of 20/200 or less. You have statutory blindness only if your visual disorder meets the criteria of 102.02 or 102.03A. You do not have statutory blindness if your visual disorder medically equals the criteria of 102.02 or 102.03A, or if it meets or medically equals 102.03B, 102.03C, or 102.04. If your visual disorder medically equals the criteria of 102.02 or 102.03A, or if it meets or medically equals 102.03B, 102.03C, or 102.04, we will find that you have a disability if your visual

CHILDHOOD PRIOR RULES	CHILDHOOD FINAL RULES
	disorder also meets the duration requirement. 3. What evidence do we need to establish statutory blindness under title XVI? For title XVI, the only evidence we need to establish statutory blindness is evidence showing that your visual acuity in your better eye or your visual field in your better eye meets the criteria in 102.00A2, provided that those measurements are consistent with the other evidence in your case record. We do not need to document the cause of your blindness. Also, there is no duration requirement for statutory blindness under title XVI (see §§416.981 and 416.983). 4. What evidence do we need to evaluate visual disorders, including those that result in statutory blindness under title II? a. To evaluate your visual disorder, we usually need a report of an eye examination that includes measurements of the best-corrected visual acuity or the extent of the visual fields, as appropriate. If there is a loss of visual acuity or visual fields, the cause of the loss must be documented. A standard eye examination will usually reveal the cause of any visual acuity loss. An eye examination can also reveal the cause of some types of visual field deficits. If the eye examination does not reveal the cause of the visual loss, we will request the information that was used to establish the presence of the visual disorder. b. A cortical visual disorder is a disturbance of the posterior visual pathways or occipital lobes of the brain in which the visual system does not interpret what the eyes are seeing. It may result from such causes as traumatic brain injury, stroke,

CHILDHOOD PRIOR RULES	CHILDHOOD FINAL RULES
	cardiac arrest, near drowning, a central nervous system infection such as meningitis or encephalitis, a tumor, or surgery. It can be temporary or permanent, and the amount of visual loss can vary. It is possible to have a cortical visual disorder and not have any abnormalities observed in a standard eye examination. Therefore, a diagnosis of a cortical visual disorder must be confirmed by documentation of the cause of the brain lesion. If neuroimaging or visual evoked response (VER) testing was performed, we will request a copy of the report or other medical evidence that describes the findings in the report. c. If your visual disorder does not satisfy the criteria in 102.02, 102.03, or 102.04, we will also request a description of how your visual disorder impacts your ability to function. 5. How do we measure best-corrected visual acuity? a. Testing for visual acuity. (i) When we need to measure your best-corrected visual acuity, we will use visual acuity testing that was carried out using Snellen methodology or any other testing methodology that is comparable to Snellen methodology. (ii) We consider tests such as the Landolt C test or the tumbling-E test, which are used to evaluate young children who are unable to participate in testing using Snellen methodology, to be comparable to testing using Snellen methodology. These alternate methods for measuring visual acuity should be performed by specialists with expertise in assessment of childhood vision.

CHILDHOOD PRIOR RULES	CHILDHOOD FINAL RULES
	(iii) If you are unable to participate in testing using Snellen methodology or other comparable testing, we will consider your fixation and visual-following behavior. If both these behaviors are absent, we will consider the anatomical findings or the results of neuroimaging, electroretinogram, or VER testing when this testing has been performed. b. Determining best-corrected visual acuity. (i) Best-corrected visual acuity is the optimal visual acuity attainable with the use of a corrective lens. In some instances, this assessment may be performed using a specialized lens; for example, a contact lens. We will use the visual acuity measurements obtained with a specialized lens only if you have demonstrated the ability to use the specialized lens on a sustained basis. However, we will not use visual acuity measurements obtained with telescopic lenses because they significantly reduce the visual field. If you have an absent response to VER testing in an eye, we can determine that your best-corrected visual acuity is 20/200 or less in that eye. However, if you have a positive response to VER testing in an eye, we will not use that result to determine your best-corrected visual acuity in that eye. Additionally, we will not use the results of pinhole testing or automated refraction acuity to determine your best-corrected visual acuity. (ii) We will use the best-corrected visual acuity for distance in your better eye when we determine whether your loss of visual acuity satisfies the criteria in 102.02A. The best-corrected visual acuity for distance is usually measured by

CHILDHOOD PRIOR RULES	CHILDHOOD FINAL RULES
	determining what you can see from 20 feet. If your visual acuity is measured for a distance other than 20 feet, we will convert it to a 20-foot measurement. For example, if your visual acuity is measured at 10 feet and is reported as 10/40, we will convert this to 20/80. (iii) If you cannot participate in visual acuity testing, we will determine that your best-corrected visual acuity is 20/200 or less in your better eye if your visual disorder meets the criteria in 102.02B. To meet 102.02B1, your impairment must result in the absence of fixation and visual-following behavior and abnormal anatomical findings indicating a visual acuity of 20/200 or less in your better eye. Such abnormal anatomical findings include, but are not limited to, the presence of Stage III or worse retinopathy of prematurity despite surgery, hypoplasia of the optic nerve, albinism with macular aplasia, and bilateral optic atrophy. To meet 102.02B2, your impairment must result in the absence of fixation and visual-following behavior and abnormal neuroimaging documenting damage to the cerebral cortex which would be expected to prevent the development of a visual acuity better than 20/200 in your better eye. Such abnormal neuroimaging includes, but is not limited to, neuroimaging showing bilateral encephalomyelitis or bilateral encephalomalacia. 6. <u>How do we measure visual fields?</u> a. <u>Testing for visual fields.</u> (i) We generally need visual field testing when you have a visual disorder that could result in visual field loss, such as

CHILDHOOD PRIOR RULES	CHILDHOOD FINAL RULES
	glaucoma, retinitis pigmentosa, or optic neuropathy, or when you display behaviors that suggest a visual field loss. (ii) When we need to measure the extent of your visual field loss, we will use visual field measurements obtained with an automated static threshold perimetry test performed on a perimeter, like the Humphrey Field Analyzer, that satisfies all of the following requirements: A. The perimeter must use optical projection to generate the test stimuli. B. The perimeter must have an internal normative database for automatically comparing your performance with that of the general population. C. The perimeter must have a statistical analysis package that is able to calculate visual field indices, particularly mean deviation. D. The perimeter must demonstrate the ability to correctly detect visual field loss and correctly identify normal visual fields. E. The perimeter must demonstrate good test-retest reliability. F. The perimeter must have undergone clinical validation studies by three or more independent laboratories with results published in peer-reviewed ophthalmic journals. (iii) The test must use a white size III Goldmann stimulus and a 31.5 apostilb (10 cd/m^2) white background. The stimuli locations must be no more than 6 degrees apart horizontally or vertically. Measurements must be reported on standard charts and include a description of the size and intensity of the test stimulus. (iv) To determine statutory blindness based on visual field

CHILDHOOD PRIOR RULES	CHILDHOOD FINAL RULES
	loss (102.03A), we need a test that measures the central 24 to 30 degrees of the visual field; that is, the area measuring 24 to 30 degrees from the point of fixation. Acceptable tests include the Humphrey 30-2 or 24-2 tests. (v) The criterion in 102.03B is based on the use of a test performed on a Humphrey Field Analyzer that measures the central 30 degrees of the visual field. We can also use comparable results from other acceptable perimeters; for example, a mean defect of 22 on an acceptable Octopus test, to determine that the criterion in 102.03B is met. We cannot use tests that do not measure the central 30 degrees of the visual field, such as the Humphrey 24-2 test, to determine if your impairment meets or medically equals 102.03B. (vi) We measure the extent of visual field loss by determining the portion of the visual field in which you can see a white III4e stimulus. The "III" refers to the standard Goldmann test stimulus size III, and the "4e" refers to the standard Goldmann intensity filters used to determine the intensity of the stimulus. (vii) In automated static threshold perimetry, the intensity of the stimulus varies. The intensity of the stimulus is expressed in decibels (dB). We need to determine the dB level that corresponds to a 4e intensity for the particular perimeter being used. We will then use the dB printout to determine which points would be seen at a 4e intensity level. For example, in Humphrey Field Analyzers, a 10 dB stimulus is equivalent to a 4e stimulus. A dB level that is higher than 10 represents a dimmer stimulus, while a dB level that is lower than 10 represents a brighter

CHILDHOOD PRIOR RULES	CHILDHOOD FINAL RULES
.	stimulus. Therefore, for tests performed on Humphrey Field Analyzers, any point seen at 10 dB or higher is a point that would be seen with a 4e stimulus. (viii) We can also use visual field measurements obtained using kinetic perimetry, such as the Humphrey "SSA Test Kinetic" or Goldmann perimetry, instead of automated static threshold perimetry. The kinetic test must use a white III4e stimulus projected on a white 31.5 apostilb (10 cd/m^2) background. In automated kinetic tests, such as the Humphrey "SSA Test Kinetic," testing along a meridian stops when you see the stimulus. Because of this, automated kinetic testing does not detect limitations in the central visual field. If your visual disorder has progressed to the point at which it is likely to result in a significant limitation in the central visual field, such as a scotoma (see 102.00A8c), we will not use automated kinetic perimetry to evaluate your visual field loss. Instead, we will assess your visual field loss using automated static threshold perimetry or manual kinetic perimetry. (ix) We will not use the results of visual field screening tests, such as confrontation tests, tangent screen tests, or automated static screening tests, to determine that your impairment meets or medically equals a listing, or functionally equals the listings. However, we can consider normal results from visual field screening tests to determine whether your visual disorder is severe when these test results are consistent with the other evidence in your case record. (See §416.924(c).) We will not consider normal test results to be consistent with the other evidence if either of the following applies: A. The clinical findings indicate that your visual disorder

CHILDHOOD PRIOR RULES	CHILDHOOD FINAL RULES
	has progressed to the point that it is likely to cause visual field loss; or B. You have a history of an operative procedure for retinal detachment. b. Use of corrective lenses. You must not wear eyeglasses during the visual field examination because they limit your field of vision. Contact lenses or perimetric lenses may be used to correct visual acuity during the visual field examination in order to obtain the most accurate visual field measurements. For this single purpose, you do not need to demonstrate that you have the ability to use the contact or perimetric lenses on a sustained basis. 7. How do we calculate visual efficiency? a. Visual acuity efficiency. We use the percentage shown in Table 1 that corresponds to the best-corrected visual acuity for distance in your better eye. b. Visual field efficiency. We use kinetic perimetry to calculate visual field efficiency by adding the number of degrees seen along the eight principal meridians in your better eye and dividing by 500. (See Table 2.) c. Visual efficiency. We calculate the percent of visual efficiency by multiplying the visual acuity efficiency by the visual field efficiency and converting the decimal to a percentage. For example, if your visual acuity efficiency is 75 percent and your visual field efficiency is 64 percent, we will multiply 0.75 x 0.64 to determine that your visual efficiency is 0.48, or 48 percent.

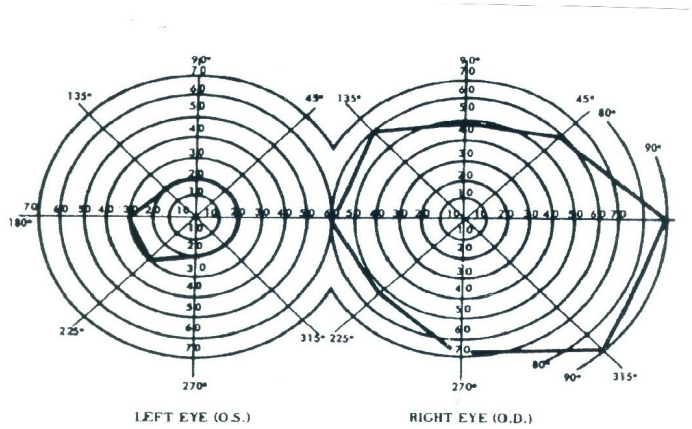
CHILDHOOD PRIOR RULES	CHILDHOOD FINAL RULES
	8. How do we evaluate specific visual problems? a. Statutory blindness. Most test charts that use Snellen methodology do not have lines that measure visual acuity between 20/100 and 20/200. Newer test charts, such as the Bailey-Lovie or the Early Treatment Diabetic Retinopathy Study (ETDRS), do have lines that measure visual acuity between 20/100 and 20/200. If your visual acuity is measured with one of these newer charts, and you cannot read any of the letters on the 20/100 line, we will determine that you have statutory blindness based on a visual acuity of 20/200 or less. For example, if your best-corrected visual acuity for distance in the better eye was determined to be 20/160 using an ETDRS chart, we will find that you have statutory blindness. Regardless of the type of test chart used, you do not have statutory blindness if you can read at least one letter on the 20/100 line. For example, if your best-corrected visual acuity for distance in the better eye was determined to be 20/125+1 using an ETDRS chart, we will find that you do not have statutory blindness as you are able to read one letter on the 20/100 line. b. Blepharospasm. This movement disorder is characterized by repetitive, bilateral, involuntary closure of the eyelids. If you have this disorder, you may have measurable visual acuities and visual fields that do not satisfy the criteria of 102.02 or 102.03. Blepharospasm generally responds to therapy. However, if therapy is not effective, we will consider how the involuntary closure of your eyelids affects your ability to maintain visual functioning over time.

CHILDHOOD PRIOR RULES	CHILDHOOD FINAL RULES
	c. Scotoma. A scotoma is a non-seeing area in the visual field surrounded by a seeing area. When we measure the visual field, we subtract the length of any scotoma, other than the normal blind spot, from the overall length of any diameter on which it falls. * * * * * C. How do we evaluate impairments that do not meet one of the special senses and speech listings? 1. These listings are only examples of common special senses and speech disorders that we consider severe enough to result in marked and severe functional limitations. If your impairment(s) does not meet the criteria of any of these listings, we must also consider whether you have an impairment(s) that satisfies the criteria of a listing in another body system. 2. If you have a medically determinable impairment(s) that does not meet a listing, we will determine whether the impairment(s) medically equals a listing or functionally equals the listings. (See §§416.926 and 416.926a.) We use the rules in §416.994a when we decide whether you continue to be disabled.
102.01 Category of Impairments, Special Senses Organs	102.01 Category of Impairments, Special Senses and Speech
102.02 Impairments of visual acuity. A. Remaining vision in the better eye after best correction is 20/200 or less; or	102.02 Loss of visual acuity. A. Remaining vision in the better eye after best correction

CHILDHOOD PRIOR RULES	CHILDHOOD FINAL RULES
B. For children below 3 years of age at time of adjudication: 1. Absence of accommodative reflex (see 102.00A for exclusion of children under 6 months of age); or 2. Retrolental fibroplasia with macular scarring or neovascularization; or 3. Bilateral congenital cataracts with visualization of retinal red reflex only or when associated with other ocular pathology.	is 20/200 or less; OR B. An inability to participate in testing using Snellen methodology or other comparable visual acuity testing and clinical findings that fixation and visual-following behavior are absent in the better eye, and: 1. Abnormal anatomical findings indicating a visual acuity of 20/200 or less in the better eye; or 2. Abnormal neuroimaging documenting damage to the cerebral cortex which would be expected to prevent the development of a visual acuity better than 20/200 in the better eye; or 3. Abnormal electroretinogram documenting the presence of Leber's congenital amaurosis or achromatopsia; or 4. An absent response to VER testing in the better eye.
	102.03 Contraction of the visual field in the better eye, with: A. The widest diameter subtending an angle around the point of fixation no greater than 20 degrees; OR B. A mean deviation of -22 or worse, determined by

CHILDHOOD PRIOR RULES	CHILDHOOD FINAL RULES
	automated static threshold perimetry as described in 102.00A6a(v); OR C. A visual field efficiency of 20 percent or less as determined by kinetic perimetry (see 102.00A7b).
	102.04 Loss of visual efficiency. Visual efficiency of the better eye of 20 percent or less after best correction (see 102.00A7c).
	Table 1.--Percentage of Visual Acuity Efficiency Corresponding to the Best-Corrected Visual Acuity Measurement for Distance in the Better Eye

Snellen		Percent visual acuity efficiency
English	Metric	
20/16	6/5	100
20/20	6/6	100
20/25	6/7.5	95
20/30	6/9	90
20/40	6/12	85
20/50	6/15	75
20/60	6/18	70
20/70	6/21	65
20/80	6/24	60

CHILDHOOD PRIOR RULES	CHILDHOOD FINAL RULES
	20/100 | 6/30 | 50
	Table 2.--Chart of Visual Fields  1. The diagram of the right eye illustrates the extent of a normal visual field as measured with a III4e stimulus. The sum of the eight principal meridians of this field is 500 degrees.

CHILDHOOD PRIOR RULES	CHILDHOOD FINAL RULES
	2. The diagram of the left eye illustrates a visual field contracted to 30 degrees in two meridians and to 20 degrees in the remaining six meridians. The percent of visual field efficiency of this field is: (2 x 30) + (6 x 20) = 180 ÷ 500 = 0.36 or 36 percent visual field efficiency.