# Transcript for Accessible Equations Video

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How do you create accessible questions in an online environment? The main concern when creating equations in an online environment is that they are often displayed as inaccessible image files. We will look at the following solutions to this problem. Mathematical markup language, text descriptions and audio recordings. We will also discuss how people with low vision access equations. We will not discuss the creation of braille materials. For that you'll need to talk to someone from your disability office directly. Equations on the web are often display as static image files; such as, GIF, PNG or JPEG instead of real text. This is accessibility problem because screen reader software used by students with visual disabilities cannot read image files. According to the American Foundation for the Blind web site, Screen Readers are "software programs that allow blind or visually impaired users to read the text that is displayed on the computer screen with a speech synthesizer or braille display."

The ideal method for making equations accessible is to use mathematical markup language known as MathML, instead of image files. Browsers that support MathML are able to read and translate markup language into properly formatted equations. You may encounter a situation where there's an important Web site linked to in a course that has image equations and they cannot be translated into MathML. In these situations, you can ask the creators of the Web site to add equivalent text in the all tag of the images and/or create audio files with someone verbalizing the equations. Keep in mind these options are the minimal requirement for accessibility, so they should only be considered if the preferred method using MathML is not possible. If none of these options are viable in your situation, then you should not link to that Web site in the course.

Some people with low vision magnify the computer screen and change the color, font and typeface of the text to read the content of a page. As a result, an accessible equation is one that a.) can be magnified, b.) still makes sense when magnified and c.) can be customized. In summary to create an accessible equation try to use a tool that outputs as MathML instead of as an image file. If you cannot use MathML, then either link to or including the alt tag of an image a text description of the equation. You can also record someone verbalizing the equation and link to that recording. Finally, for the sake of people with low vision you want to make sure the screen can be magnified and the text customizable.