

Click to prove
you're human



Get Access to: Ask & get answers from experts & other users Play Quiz and test your skills Free Download eBooks, Notes, Templates, etc. Study Materials Latest Articles Have an account? Sign In Cookies on Land Surveyors United - Surveying Education Community This network uses cookies. By continuing to browse this network, you agree to the use of cookies. Close and proceed The subject area of land surveying is very interesting and to become a licensed land surveyor you need to understand and be able to put into practice a wide range of land survey formulas as the majority of land surveying is based around mathematics and physics. In today's guide we shall look at land survey formulas in more detail. And if you are a Land Surveyor, here is an entire forum and hub for sharing surveying formulas. Listen to this Article Origin and History of Land Survey Formulas The wonderful thing about land surveying is that even though it has been around since records first began, the methods and formulas have barely changed. Land survey formulas have always been based around mathematics and physics and use fundamental rules of each of these subject areas to create land surveys. Back in the times of the ancient Egyptians land survey formulas were much more basic and used simple rules of geometry to conduct their surveys. While the basics are still the same today, thanks to increased knowledge in the field of mathematics land survey formulas have become a lot more advanced and have allowed for increased accuracy in land surveys. Below we shall look at some of the main land survey formulas that are used around the world. Types of Land Survey Formulas There are hundreds of different land survey formulas, and each one serves its own purpose. Whenever a land surveyor is required to do a land survey they must first establish which land survey formulas are most appropriate for the type of land they are working with. The type of land survey formula they use also depends on the type of survey that is being done. There are dozens of different types of land surveys, some of which are more complex than others. For land surveys that cover huge areas of land, the land surveyor will usually use a land survey formula that takes into account the curvature of the Earth to ensure a more accurate land survey. However, for smaller areas of land the land surveyor will tend to use a land survey formula that assumes the land is on a flat plane as the curvature of the Earth has such minimal effect. Some land surveys only require the boundaries of the land to be measured, whereas others require the height and contours of the land to be mapped as well. The chosen land survey formulas will suit the type of survey. What Kind of Math Do Surveyors Use? Algebra and Trigonometry Land Survey Formulas Algebra and trigonometry make up a large number of the most commonly used land survey formulas. Trigonometry land survey formulas are typically used when measuring the height and angle of the land. In fact, land surveyors are one of the most prominent users of trigonometry formulas. Basic algebra is incredibly useful for land survey formulas as it is used to establish length, area, volume and more - which are essential for land surveys. Other land survey formulas include quadratic equations, spherical trigonometry and spherical coordinates. Land surveyors must have a strong and thorough understanding of all of these land survey formulas and they form a huge part of any land surveying college courses. Probability and Statistics Land Survey Formulas Probability and statistics are two other types of land survey formulas that are well utilized within the profession. These two areas are important when it comes to data collection and interpretation - a major part of land surveying. Areas of probability and statistics that are most commonly used in land survey formulas include: standard deviation, variance, test of significance, error ellipses, data distribution and histograms. Geodesy Land Survey Formulas We mentioned earlier how many land surveyors need to take into account the curvature of the Earth to allow for the most accurate land surveys of large areas. Geodesy land survey formulas can be quite complex and are similar formulas as those that are used by astronomers. Some of the geodesy land survey formulas include: geodetic data, gravity fields, reference ellipsoids, conversion from geodetic heights to elevation and orbit determination and tracking. Geodesy land survey formulas are some of the most complicated used by land surveyors and it requires intense levels of knowledge and study before they can be perfected and used. Follow the Land Surveying Formulas that Work Hub! Tags: land survey formulas, formulas, calculations Surveying Articles is a place for members to Share Land Surveying related articles, presentations and knowledge with the Land Surveyors United Community. Post or embed articles for future generations of land surveyors. Do you have an article about Land Surveying that you would like to share? Land Surveying is a timeless art and science and it is therefore, evergreen! You may also know that a lot of older publications have gone away, unfortunately. If you have written or published land surveying articles in the past, we would be honored for you to share them here with us. If it is an older article, you can even republish it here with updates and reflections. class="block"Tip: If you published an article in the past on one of the older sites which no longer exist, you can use the Wayback Machine to find it. Then just copy/paste the old article inside a new post here. Just be sure to tell us where it was previously posted. Want to embed a PDF Document? If you have a PDF document or article related to land surveying that you would like to embed inside an article post, simply copy/paste the following code block into the HTML view of the post editor and replace the BOLD part of the code with the URL of the PDF you'd like to embed. Code to use: