

Chapter 1 : Area Calculator

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Click any single cell inside the data set. On the Insert tab, click PivotTable. The following dialog box appears. Excel automatically selects the data for you. The default location for a new pivot table is New Worksheet. To get the total amount exported of each product, drag the following fields to the different areas. Product Field to the Row Labels area. Amount Field to the Values area. Country Field to the Report Filter area. Below you can find the pivot table. Bananas are our main export product. The Product field contains 7 items. In the pivot table, select Apple and Banana. Right click and click on Group. To change the name of the newly created field Product2 , double click it. To ungroup, select the group, right click and click on Ungroup. To collapse the groups, click the minus signs. Apple and Banana Group1 have a higher total than all the other products Group2 together. Group Dates The Date field contains many items. To group the dates by months, execute the following steps. Click any cell inside the Date column. Select Months and click OK. Click any cell inside the Total column. The PivotTable Tools contextual tab activates.

Ch. 6 - The Two Dimensional Field: Area 10/25/09 PM Overview $\hat{\epsilon}$ Screen provides you with "living space" for presenting media events $\hat{\epsilon}$ The viewfinder has fixed borders that define the new aesthetic playing field $\hat{\epsilon}$ This ch. examines the structural factors of screen space: aspect ratio and the aesthetics of object size and image.

Surface Area Calculator Volume Calculator Area is a quantity that describes the size or extent of a two-dimensional figure or shape in a plane. It can be visualized as the amount of paint that would be necessary to cover a surface, and is the two-dimensional counterpart of the one-dimensional length of a curve, and three-dimensional volume of a solid. Provided below are equations for some of the most common simple shapes, and examples of how the area of each is calculated. Rectangle A rectangle is a quadrilateral with four right angles. It is one of the simplest shapes, and calculating its area only requires that its length and width are known or can be measured. A quadrilateral by definition is a polygon that has four edges and vertices. In the case of a rectangle, the length typically refers to the longer two edges of the quadrilateral, while the width refers to the shorter of the two edges. When the length and width of a rectangle are equal, the shape is a special case of a rectangle, called a square. The equation for calculating the area of a rectangle is as follows: Because he owns some cows that he did not want frolicking freely, he fenced the piece of land and knows the exact length and width of each edge. The farmer also lives in the United States, and being unfamiliar with the use of SI units, still measures his plot of land in terms of feet. The foot was defined to be exactly 0. Unfortunately for the farmer, he lives in an area predominated by foreign investors with smaller feet, who felt that they should be getting more square feet for their money, and his land remains unsold today. Triangle There are many equations for calculating the area of a triangle based on what information is available. As mentioned in the calculator above, please use the Triangle Calculator for further details and equations for calculating the area of a triangle, as well as determining the sides of a triangle using whatever information is available. The formula is as follows: The Farmer and his Daughter - Triangle Daze At this point in time, through extreme effort and perseverance, the farmer has finally sold his 21, sq ft plot of land and has decided to use some of the money earned to build a pool for his family. Unfortunately for the farmer, he does not consider the fact that the maintenance costs of a pool for one year alone could likely pay for his children to visit any pool or water theme park for years to come. Even more unfortunately for the farmer, his 7-year-old daughter who has recently traveled to Egypt vicariously through Dora the Explorer, has fallen in love with triangles, and insists that the pool not only be triangular in shape, but also that the measurements $\hat{\epsilon}$ must only include the number 7, to represent her age and immortalize this point of her life in the form of a triangular pool. The farmer must now determine whether he has sufficient area in his backyard to house a pool. While the farmer has begun to learn more about SI units, he is as yet uncomfortable with their use and decides that his only viable option is to construct a pool in the form of an equilateral triangle with sides 77 ft in length, since any other variation would either be too large or small. Given these dimensions, the farmer determines the necessary area as follows: Since the longest distance between any two points of an equilateral triangle is the length of the edge of the triangle, the farmer reserves the edges of the pool for swimming "laps" in his triangular pool with a maximum length approximately half that of an Olympic pool, but with double the area $\hat{\epsilon}$ all under the watchful eyes of the presiding queen of the pool, his daughter, and the disapproving glare of his wife. Trapezoid A trapezoid is a simple convex quadrilateral that has at least one pair of parallel sides. In a trapezoid, the parallel sides are referred to as the bases of the trapezoid, and the other two sides are called the legs. There exist more distinctions and classifications for different types of trapezoids, but their areas are still calculated in the same manner using the following equation: Slowly, she has begun to accept other shapes into her life and pursues her myriad different interests $\hat{\epsilon}$ currently freestyle BMX. As such, she requires a ramp, but unfortunately for the farmer, not just any ramp. The ramp must be comprised of only shapes that can be formed using multiple triangles, since like her rap idol B. It must of course, also only use the number 9 in its measurements to reflect her age. The farmer decides that his best option is to build a ramp comprised of multiple rectangles, with the side face of the ramp being in the shape of a trapezoid. He decides to build a

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ramp with a trapezoidal face with height of 9 ft, a bottom base of length The area of the trapezoid is calculated as follows:

Chapter 3 : Write a formula for a two-dimensional vector field? | Yahoo Answers

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Limiting focus[edit] One approach to achieving simplification within a photograph is to use a wide aperture when shooting to limit the depth of field. When used properly in the right setting, this technique can place everything that is not the subject of the photograph to be out of focus. The blurred background focuses the eye on the flowers. A similar approach, given the right equipment, is to take advantage of the Scheimpflug principle to change the plane of focus. Field of view[edit] By altering the position of the camera, the background can be changed so that the subject has fewer distractions to compete with. This could be achieved by getting closer, moving laterally, or moving the camera vertically. This is true in most common places and is the final test and the you must do this in order to pass the photographers law of photograpy. Symmetry[edit] The "rule of odds" suggests that an odd number of subjects in an image is more interesting than an even number. Thus if you have more than one subject in your picture, the suggestion is to choose an arrangement with at least three subjects. An even number of subjects produces symmetries in the image, which can appear less natural. Related to the rule of odds is the observation that triangles are an aesthetically pleasing implied shape within an image. Viewpoint[edit] The position of the camera can strongly influence the aesthetics of an image. For example, if a boy is photographed from above, for example from the eye level of an adult, he is diminished in stature. An image can be rendered more dramatic when it fills the frame. People can have a tendency to perceive things as larger than they actually are, and filling the frame fulfills this psychological mechanism. This can be used to eliminate distractions from the background. Lines[edit] Every photograph contains lines. Both physical lines and continuous, less obvious lines exist. The brain often unconsciously reads near continuous lines between different elements and subjects at varying distances. Strong flowing lines can be created without a photographer even realizing it. Movement is also a source of line, blur can also create a reaction. Subject lines which create an illusion, contribute to both mood and by means of linear perspective give the illusion of depth of field. Oblique and angular lines give us the sense of dynamic balance and a sense of action. Lines can also direct attention towards the main subject of the photograph, or contribute to the photographs organization by dividing it into compartments. Straight Lines[edit] Horizontal, Vertical, and Angled lines all contribute to creating different moods of a photograph. The angle and the relationship to the size of the frame both work to determine the influence the line has on the image. They are also strongly influenced by tone, color, and repetition in relation to the rest of the photograph. Straight, horizontal lines, commonly found in landscape photography, gives the impression of calm, tranquility, and space. An image filled with strong vertical lines tends to have the impression of height, and grandeur. Tightly angled convergent lines give a dynamic, lively, and active effect to the image. Viewpoint is very important when dealing with lines in photography, because every different perspective elicits a different response to the photograph. Too many lines without a clear subject point suggest chaos in the image and may conflict with the mood the photographer is trying to evoke. Curved Lines[edit] Curved lines are generally used to create a sense of flow within a photograph. The eye generally scans these lines with ease and enjoyment as it follows it throughout the image. Compared to straight lines, curves provide a greater dynamic influence in a photograph. When paired with soft-directional lighting curved lines can give gradated shadows which usually results in a very harmonious line structure within the image. Perspective is also important with curved lines, generally speaking the higher the viewpoint the more open the lines tend to be.

Chapter 4 : Two dimensions, free electrons

- One of the most basic ways of stabilizing the two-dimensional field is to bring into balance the forces of and the is determined by the dimension of the object (how much area the object takes up relative to the total screen area), its basic shape and orientation, its location within the frame, and its color.

August 8, National University of Singapore Left The lattice mismatch between the monolayer graphene black on multilayer black phosphorous blue generates PMF on the graphene layer. Right The spatial distribution and intensity of the PMF can be tailored by changing the rotation angle between the graphene and black phosphorous. National University of Singapore National University of Singapore researchers have discovered a simple and effective method to produce a large area pseudo-magnetic field PMF on graphene, and demonstrated how it can be tuned with desired spatial distribution and intensity for data storage and logic applications "Tailoring sample-wide pseudo-magnetic fields on a graphene-black phosphorus heterostructure". The field of electronics focuses on how to control and exploit the properties of electrons. To study or modify the properties of these electrons at the quantum regime, a magnetic field has to be applied. Another way of achieving this effect is to create a special type of strain mechanically in graphene, where the electrons behave as if they are under the influence of an externally applied magnetic field. In this case, no magnetic field is physically applied and this is explained by the presence of strain-induced PMF. Electrons have additional degrees of freedom independent parameter describing the electronic state other than its charge. These are known as the spins and valley degree of freedom. Valleys are the maxima and minima of electron energies in a crystalline solid. A method to control electrons in different valleys can potentially be used to develop more efficient computing technologies. Strain-induced PMFs in graphene have been explored as a promising approach to pull apart the valleys in graphene and make their energies non-equivalent, producing intriguing physics such as valley-polarised current. Many researchers have been attracted by the enormous PMFs up to teslas observed in non-planar, strained graphene nanostructures such as graphene nanobubbles. However, these are distributed randomly and they are not feasible for practical implementation. Although theory predicts that strains with triangular symmetry are able to create PMF in materials, there is currently no known experimental technique which can create the specific strain texture to generate a uniform PMF with the desired spatial distribution and intensity. The large lattice mismatch and shear strain imposed by the lattices on each other give rise to PMFs on graphene, which can be measured directly using scanning tunnelling microscopy. In addition, they discovered a way to tailor the intensity and spatial distribution of the PMFs on graphene by changing the rotation angle between the crystallographic directions of the graphene and the BP. When an external magnetic field is applied in the presence of the PMF, they are able to create two types of non-equivalent currents, known as the valley-polarised current in electrical transport measurements. First, the PMF fields can serve as energy barriers to efficiently confine currents into a one-dimensional channel. In addition, valley filters can be developed based on valley polarisation. Importantly, we discovered that a complex strain texture formed by placing a hexagonal crystal graphene on an orthorhombic crystal BP is suitable for generating a large area PMF. The implication is that there might be other combinations of two-dimensional crystals which have not been discovered yet. Our study thus opens up new opportunities for strain engineering with a view towards tailoring the spatial distribution and intensity of the PMFs.

Chapter 5 : Two dimensional shapes formulas of area and perimeter calculation

Line/point sink. Similar to a line source, a line sink is a line which absorbs fluid flowing towards it, from planes perpendicular to it. When we consider 2-D flows on the perpendicular plane, it appears as a point sink.

Chapter 6 : Introduction to Art/The Basics of Two-Dimensional Art - Wikibooks, open books for an open world

Non-perturbative field theory; from two-dimensional conformal field theory to QCD in four dimensions The aim of this

research is to give evidence that the two-dimensional nucleation growth hillocks occur on the surface of () face of borax crystals by in situ optical microscopy technique and supported by ex situ technique of AFM.

Chapter 7 : java - Syntax for creating a two-dimensional array - Stack Overflow

A shape with only having two dimensions of width and height and not having another dimension like thickness then it is called two dimensional shape. For example Circles, Triangles, rectangle, Squares, etc are called two dimensional objects.

Chapter 8 : Two-dimensional space - Wikipedia

A two-dimensional discrete spatial filter was developed. It serves as a means to classify meteorological fields on a limited-area grid according to their spatial dimensions by filtering certain wavenumber ranges.

Chapter 9 : Make your first Two-dimensional PivotTable in Excel - Office Watch

Two-dimensional Pivot Table Starting with your original data from the original "pivot" worksheet, create a pivot table on a worksheet named GROUPB by date and summing the amount for each date. If you drag a field to the Row Labels area and Column Labels area, you can create a two-dimensional pivot table.