

Real world applications of graphs and probabilities

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Real World Applications of Graphs and Probabilities Parabolas and Hyperbolas Although both parabola and hyperbola belong to a general of conic shapes and after series of transformations equations of parabola and hyperbola can be rewritten in the same general form, their graphs are different.

Parabola looks somewhat similar to one of the two branches of hyperbola; however, there is an important difference between them - symmetry. A parabola is symmetrical with regard to symmetry axis that goes through its vertex; a branch of a hyperbola is not necessarily symmetrical.

Graph of a parabola Graph of a hyperbola

Some practical applications of parabolas include:

so called parabolic antennas;

flashlights and reflectors;

path of a projectile and solar furnace (Jones 2005 n/p).

Some practical applications hyperbolas include:

Optics (lenses for telescopes);

Astronomy (trajectories of comets);

Navigation.

2. Probability applications

One area where probabilities are widely used nowadays is earthquake predictions (American Geophysical Union 1995 n/p). The probabilities of certain geological events that can lead to an earthquake are estimated for a given area and used to formulate important predictions.

Another field where applications of probabilities are extremely popular is

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business. Probabilities are used in financial models (Myerson, R 2001 p. 1) as well as in supply chain, logistics, marketing forecasts etc.

References

American Geophysical Union. (1995). Use of probabilities for earthquake prediction. Retrieved December 12, 2005, from [http://www. agu. org/revgeophys/aki00/node3. html](http://www.agu.org/revgeophys/aki00/node3.html)

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Myerson, R. (2001). Practical probabilities with spreadsheets. Retrieved December 12, 2005, from [http://www. kellogg. northwestern. edu/faculty/myerson/ftp/joint. pdf](http://www.kellogg.northwestern.edu/faculty/myerson/ftp/joint.pdf)