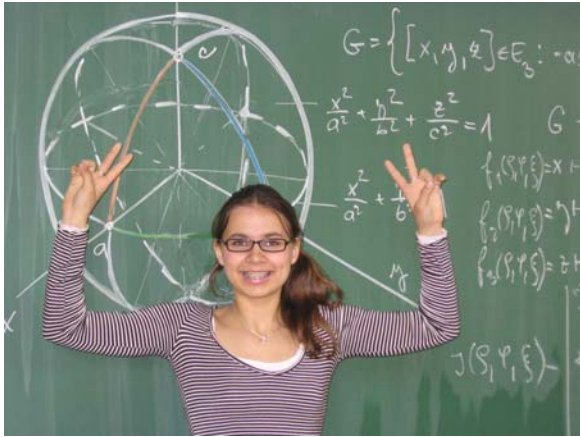


WHY NOT VISIT



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NEED HELP?

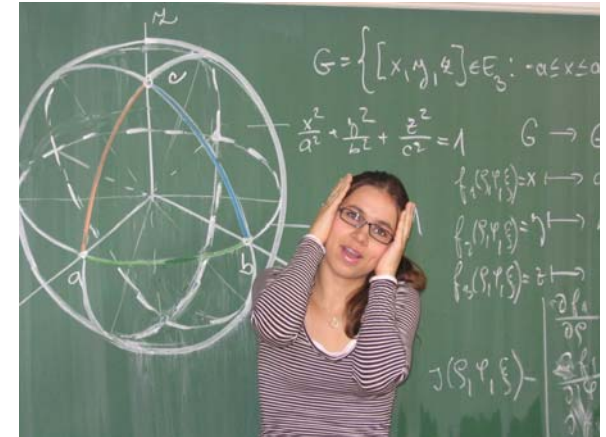


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PROBLEMS WITH MATHS?



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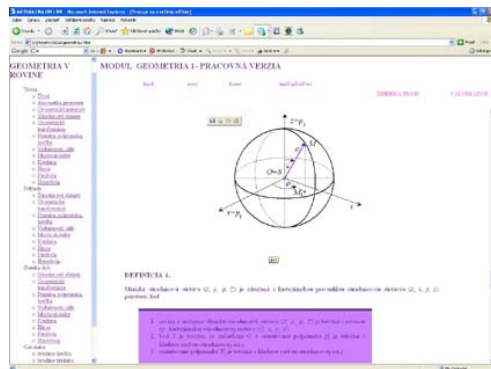
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useful to all students from secondary school to PhD, secondary school teachers, trainers, university lecturers, researchers or scientists, any interested party from industry or research and development, and to anyone who wants to improve their knowledge and understanding of mathematics or needs help with the solution of specific mathematical problems, or wants expert consultancy in mathematics.

EVLAM provides a virtual database of mathematical resources and e-learning materials including some of the latest interactive on-line calculations and visualisations on the web

available from 8 EU countries – the partners of this EU funded project.

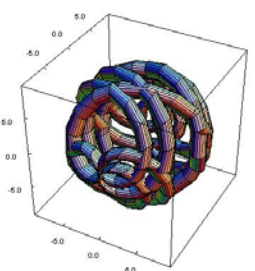


$x(u) = 0 + 1 \cdot \cos(2 \text{ Pi } u)$
 $y(u) = 1 + \sin(2 \text{ Pi } u)$
 $z(u) = 0$
 $k = 2$
 $l = 17$

$x(u, v) = x[u] \cdot \cos[k \text{ Pi } v] \cdot \cos[l \text{ Pi } v] - y[u] \cdot \sin[k \text{ Pi } v] \cdot \cos[l \text{ Pi } v] + z[u] \cdot \sin[l \text{ Pi } v]$
 $y(u, v) = x[u] \cdot \sin[k \text{ Pi } v] + y[u] \cdot \cos[k \text{ Pi } v]$
 $z(u, v) = -x[u] \cdot \cos[k \text{ Pi } v] \cdot \sin[l \text{ Pi } v] + y[u] \cdot \sin[k \text{ Pi } v] \cdot \sin[l \text{ Pi } v] + z[u] \cdot \cos[l \text{ Pi } v]$

$u \in [0, 1]$
 $v \in [0, 1]$

Number of points to plot: 20 or 150



Funkcie dvoch premenných

$f_1(x, -2) = -\frac{4}{3\sqrt{3}} = \frac{1}{3} \cdot \sqrt{2} \cdot (-2) = -\frac{4}{3\sqrt{3}} = \frac{1}{3}$

Rovnica dotyčkového rovinu

$$x - \sqrt{2} \cdot (-2) = f_1'(x, -2) \cdot (x - 2) + f_1'(y, -2) \cdot (y + 2)$$

$$x + 1 = -\frac{1}{3}(x - 2) + \frac{1}{3}(y + 2)$$

$$x - y + 3z - 1 = 0$$

Obr 7b: Dotyčková rovina grafu funkcie

Dvojitá trojitá integrály

Obr 20: Elementárna oblasť

$$\int_0^1 \int_0^{1-x} \int_0^{1-x-y} y \cos(x+z) dy dz dx = \int_0^1 \int_0^{1-x} \left[\frac{1}{2} \cos(x+z) \right]_0^{1-x-y} dz dx =$$

$$= \int_0^1 \int_0^{1-x} \left(\frac{1}{2} \cos(x+z) \right) dz dx = \int_0^1 \left[\frac{1}{2} \sin(x+z) \right]_0^{1-x-y} dx =$$

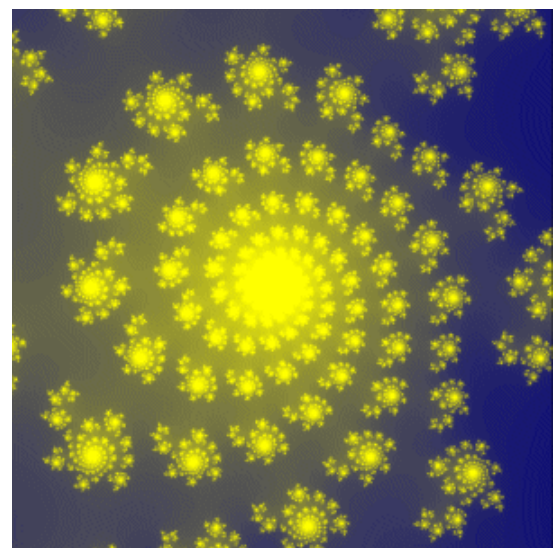
$$= \int_0^1 \left(\frac{1}{2} \sin(x+1) - \frac{1}{2} \sin(x) \right) dx = \frac{1}{2} \int_0^1 (1 - \sin(x)) dx =$$

$$= \left[\frac{x}{2} + \frac{1}{2} \cos(x) - \frac{1}{2} \sin(x) \right]_0^1 = \frac{1}{2} \left(1 + \cos(1) - \sin(1) \right)$$

Obyčajná elementárna oblasť

$$\int_0^1 \int_0^{1-x} \int_0^{1-x-y} dy dz dx = \int_0^1 \int_0^{1-x} \left[\frac{1}{2} dy dz \right]_0^{1-x-y} dz dx =$$

$$= \int_0^1 \int_0^{1-x} \left(\frac{1}{2} (1-x-y) \right) dz dx = \int_0^1 \left[\frac{1}{2} (1-x)z - \frac{1}{4} y^2 \right]_0^{1-x-y} dx =$$

$$= \int_0^1 \left(\frac{1}{2} (1-x)^2 - \frac{1}{4} (1-x)^2 \right) dx = \int_0^1 \frac{1}{4} (1-x)^2 dx = \frac{1}{4} \left[-\frac{1}{3} (1-x)^3 \right]_0^1 = \frac{1}{12}$$


On-line consultancy services are offered to those wishing to learn about the latest results in mathematics and teaching mathematics.