

**ZMATH 2016c.00762**

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**Circles and parabolas in 3-space.**

Consortium 109, 1-3 (2015).

From the text: This edition's Geometer's Corner had its genesis with a question and a discovery. The question: How do you find the equations for circles and parabolas in 3-space? The discovery: GeoGebra 5, the latest GeoGebra update, now has a 3D component that allows you to define and plot curves and surfaces parametrically using the command Curve  $\langle$ Expression $\rangle$ ,  $\langle$ Expression $\rangle$ ,  $\langle$ Expression $\rangle$ ,  $\langle$ Parameter Variable $\rangle$ ,  $\langle$ Start Value $\rangle$ ,  $\langle$ End Value $\rangle$ . Curves can also be defined constructively using a variety of tools that appear in the MENU bar. There is an Input Window where one can enter points, vectors, and implicit definitions of surfaces such as planes. Any time a curve is defined either by entry or by construction, relevant information about it appears in the Algebra Window.

*Classification:* G70 U70

*Keywords:* solid geometry; analytic geometry; vector geometry; geometry software; equations of circles; equations of parabolas; 3D geometry; coordinates; parameters; parametric equations; geometric constructions; intersections; 3D curves; visualization