

Answer on Question #57410 – Math – Calculus

Question

Write each equation in standard form.

$$x^2 + y^2 - 8x + 10y + 15 = 0$$

Solution

$$x^2 + y^2 - 8x + 10y + 15 = 0$$

$$x^2 - 8x + 16 + y^2 + 10y + 25 + 15 - 16 - 25 = 0$$

$$(x - 4)^2 + (y + 5)^2 = 26$$

In the plane Oxy this equation represents a circle, in the space Oxyz this equation represents a cylinder.

Answer: $(x - 4)^2 + (y + 5)^2 = 26$.