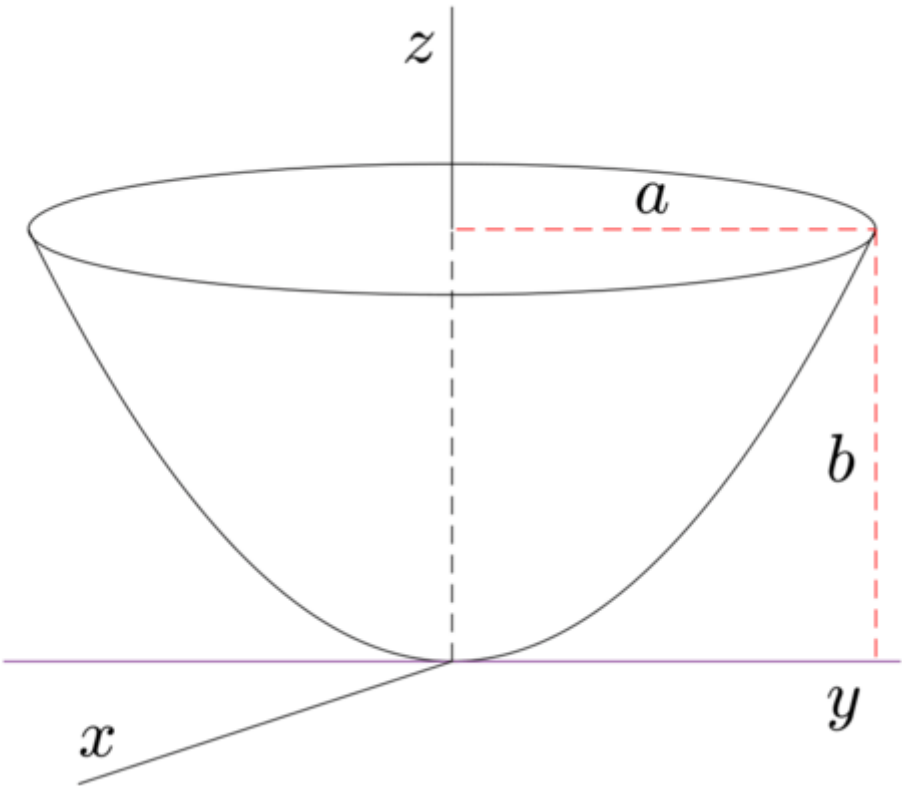


Surface Area of a Paraboloid

Compute the lateral surface area $A = \int_S dS$ of a paraboloid (see figure), defined by

$a^2 z = b(x^2 + y^2), \quad \text{for } 0 \leq z \leq b.$

Compute the resulting two-dimensional integral using polar coordinates.



✓ Completed Go to next item