



Calculus 2 Workbook

Surface area of revolution

krista king
MATH

SURFACE AREA OF REVOLUTION

- 1. Find the surface area of the object generated by revolving the curve around the x -axis on the interval $2 \leq x \leq 7$.

$$f(x) = \frac{1}{3}x + 4$$

- 2. Find the surface area of the object generated by revolving the curve around the x -axis on the interval $1 \leq x \leq 5$.

$$g(x) = \frac{2}{3}x + 5$$

- 3. Set up the integral that approximates the surface area of the object generated by revolving the curve around the x -axis on the interval $-3 \leq x \leq 3$. Do not evaluate the integral.

$$h(x) = x^2 + 3$$

- 4. Find the surface area of the object generated by revolving the curve around the line $y = -1$ on the interval $3 \leq x \leq 9$.

$$g(x) = 2\sqrt{2}x + 7$$



SURFACE OF REVOLUTION EQUATION

- 1. Find an equation for the surface generated by revolving the curve around the x -axis.

$$3x^2 + 2y^2 = 8$$

- 2. Find an equation for the surface generated by revolving the curve around the y -axis.

$$5x^2 = 8y^2$$

- 3. Find an equation for the surface generated by revolving the curve around the x -axis.

$$9x^2 + 25y^2 = 36$$



