Rutgers University
Math 152

Section 6.4: Areas of Surfaces of Revolution - Worksheet

1. Find the surface area obtained by revolving the given curve about the given axis.

   (a) The curve $y = \sqrt{3x - 5}$, $2 \leqslant x \leqslant 3$, revolved about the x-axis.

   (b) The curve $x = \sqrt{16y - y^2}$, $0 \leqslant y \leqslant 8$, revolved about the y-axis.

   (c) The curve $x = 2\sqrt[3]{y}$, $0 \leqslant y \leqslant 1$, revolved about the x-axis.

   (d) The curve $x = \dfrac{3}{5}y^{5/3}$, $0 \leqslant y \leqslant 1$, revolved about the y-axis.

   (e) The curve $y = x^{3/2}$, $1 \leqslant x \leqslant 4$, revolved about the y-axis.