1. The curve  $y = \frac{1}{3}x^3$  for  $1 \le x \le 2$  is rotated around the *x*-axis.

Find the area of the resulting surface.

1. The curve  $y = \sqrt{1 - x^2}$  for  $-1/2 \le x \le 1/2$  is rotated around the x-axis. Find the area of the resulting surface. 1. The curve  $y = 2\sqrt{x}$  for  $0 \le x \le 3$  is rotated around the x-axis. Find the area of the resulting surface. 1. The curve  $y = \frac{1}{2} (e^x + e^{-x})$  for  $0 \le x \le 2$  is rotated around the *x*-axis. Find the area of the resulting surface.