

# Volumes of Solids of Revolution -Worksheet

Find an integral expression for the volume of the solid obtained by rotating region  $R$  around the line  $L$ .

1.  $R$  : the region bounded by  $y = x$  and  $y = \sqrt{x}$ ;  $L : x = 2$ .
2.  $R$  : the region bounded by  $y = x$  and  $y = \sqrt{x}$ ;  $L : x = 2$ .
3.  $R$  : the region bounded by  $y = 1 - x^2$ ,  $y = 1$  and  $x = 1$ ;  $L : x = 0$ .
4.  $R$  : the region bounded by  $y = 1 - x^2$ ,  $y = 1$  and  $x = 1$ ;  $L : x = 1$ .
5.  $R$  : the region bounded by  $y = 1 - x^2$ ,  $y = 1$  and  $x = 1$ ;  $L : x = 2$ .
6.  $R$  : the region bounded by  $y = 1 - x^2$ ,  $y = 1$  and  $x = 1$ ;  $L : x = -0.5$ .
7.  $R$  : the region bounded by  $y = \sqrt{x}$ ,  $x = 1$  and  $y = 0$ ;  $L : y = 0$ .
8.  $R$  : the region bounded by  $y = x^2$  and  $y = 2x$ ;  $L : x = 3$ .
9.  $R$  : the region bounded by  $y = x^2$  and  $y = 2x$ ;  $L : y = 0$ .
10.  $R$  : the region bounded by  $y = x^2$  and  $y = 2x$ ;  $L : y = 7$ .

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