

2. In this question, you do not need to simplify your answer. Consider the region R bounded by $y = x/2$ and $y = \sqrt{2x}$.

(a) Find an integral (but do not evaluate) that represents the volume of the solid of revolution if we revolve the region R :

i. (2 points) about the x -axis.

ii. (2 points) about the y -axis.

iii. (2 points) about the line $y = -1$.

iv. (2 points) about the line $x = 10$.

(b) (2 points) Find an integral (but do not evaluate) that represents the perimeter of the region R .