Assignment 12

The task date for submitting this assignment is 16th June.

As an NFTC online course student, you are expected to submit this assignment.

In question 1, the volume is incorrect.

Accurate Answers:

1) For the volume of a solid generated by revolving the region bounded by the parabola $y = 2x^2$ and the line $y = 4$ about the given line $x = a$.

2) The area of the region bounded by the lines $y = 2x$, $y = 1$, and $y = 4$.

3) The length of the arc of the curve $y = \sqrt{2x^2 + 1}$ from $x = 0$ to $x = 1$.

4) The volume of the solid obtained by revolving the region bounded by the curves $y = x^2$ and $y = x$ about the line $y = 2$.

5) The surface area of the solid generated by revolving the region bounded by the curve $y = \sin x$ from $x = 0$ to $x = \pi$ about the x-axis.

6) The area of the region enclosed by the curves $y = \sqrt{x}$ and $y = x^2$.

7) The volume of the solid obtained by revolving the region bounded by the curves $y = x^2$, $y = 2x$, and the x-axis about the y-axis.

8) The volume of the solid obtained by revolving the region bounded by the curves $y = x^3$, $y = 1$, and the line $x = 2$ about the line $y = 3$.

9) The surface area of the solid generated by revolving the region bounded by the curve $y = \ln x$ from $x = 1$ to $x = e$ about the x-axis.

10) The volume of the solid obtained by revolving the region bounded by the curves $y = \sqrt{2x}$, $y = 0$, and the line $x = 2$ about the y-axis.

11) The area of the region bounded by the curves $y = x^2$, $y = x^3$, and the line $y = 4$.

12) The length of the curve $y = \sin x$ from $x = 0$ to $x = 2\pi$.

13) The area of the region bounded by the curves $y = x^2$, $y = 2x$, and the x-axis.

14) The volume of the solid obtained by revolving the region bounded by the curves $y = x^2$, $y = 2x$, and the line $x = 2$ about the line $y = 3$.

15) The surface area of the solid generated by revolving the region bounded by the curve $y = \sin x$ from $x = 0$ to $x = 2\pi$ about the y-axis.

16) The area of the region bounded by the curves $y = x^2$, $y = x^3$, and the line $y = 4$.

17) The volume of the solid obtained by revolving the region bounded by the curves $y = x^2$, $y = 2x$, and the x-axis about the line $y = 3$.

18) The surface area of the solid generated by revolving the region bounded by the curve $y = \ln x$ from $x = 1$ to $x = e$ about the y-axis.

19) The volume of the solid obtained by revolving the region bounded by the curves $y = \sqrt{2x}$, $y = 0$, and the line $x = 2$ about the y-axis.

20) The area of the region bounded by the curves $y = x^2$, $y = x^3$, and the line $y = 4$.

21) The volume of the solid obtained by revolving the region bounded by the curves $y = x^2$, $y = 2x$, and the x-axis about the line $y = 3$.

22) The surface area of the solid generated by revolving the region bounded by the curve $y = \sin x$ from $x = 0$ to $x = 2\pi$ about the x-axis.

23) The area of the region bounded by the curves $y = x^2$, $y = x^3$, and the line $y = 4$.

24) The volume of the solid obtained by revolving the region bounded by the curves $y = \sqrt{2x}$, $y = 0$, and the line $x = 2$ about the y-axis.

25) The area of the region bounded by the curves $y = x^2$, $y = x^3$, and the line $y = 4$.

26) The volume of the solid obtained by revolving the region bounded by the curves $y = \sin x$ from $x = 0$ to $x = 2\pi$ about the y-axis.

27) The area of the region bounded by the curves $y = x^2$, $y = x^3$, and the line $y = 4$.

28) The volume of the solid obtained by revolving the region bounded by the curves $y = \sqrt{2x}$, $y = 0$, and the line $x = 2$ about the y-axis.

29) The area of the region bounded by the curves $y = x^2$, $y = x^3$, and the line $y = 4$.

30) The volume of the solid obtained by revolving the region bounded by the curves $y = \sin x$ from $x = 0$ to $x = 2\pi$ about the y-axis.

31) The area of the region bounded by the curves $y = x^2$, $y = x^3$, and the line $y = 4$.

32) The volume of the solid obtained by revolving the region bounded by the curves $y = \sqrt{2x}$, $y = 0$, and the line $x = 2$ about the y-axis.

33) The area of the region bounded by the curves $y = x^2$, $y = x^3$, and the line $y = 4$.

34) The volume of the solid obtained by revolving the region bounded by the curves $y = \sin x$ from $x = 0$ to $x = 2\pi$ about the y-axis.

35) The area of the region bounded by the curves $y = x^2$, $y = x^3$, and the line $y = 4$.

36) The volume of the solid obtained by revolving the region bounded by the curves $y = \sqrt{2x}$, $y = 0$, and the line $x = 2$ about the y-axis.