EVENS

1. Find the area under the curve $y = 2x - x^2$ from $x = 1$ to $x = 2$ with $n = 4$ left-endpoint rectangles.

2. Find the area under the curve $y = 2x - x^2$ from $x = 1$ to $x = 2$ using the Trapezoid Rule with $n = 4$.

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3. Find the area under the curve $y = 2x - x^2$ from $x = 1$ to $x = 2$ using the Midpoint Formula with $n = 4$.

4. Find the area under the curve $y = 2x - x^2$ from $x = 1$ to $x = 2$. $\frac{2}{3}$

5. Find the average value of $f(x) = 4x \cos x^2$ on the interval $\left[0, \sqrt{\frac{\pi}{2}}\right]$.

6. Find the average value of $f(x) = 2|x|$ on the interval $[-1, 1]$. 1

7. Find the length of the curve described by the parametric curve:
$x = \cos t$ and $y = \sin t$ from $t = \frac{\pi}{6}$ to $t = \frac{\pi}{3}$

8. Find the length of the curve described by $x = \frac{y^3}{18} + \frac{3}{2y}$ from y = 2 to y = 3. $\frac{47}{36}$

9. Find the slope of the curve $r = 2\cos 4\theta$.

10. Find the slope of the curve $r = 2 - 3\sin\theta$ at $(2, \pi)$. $\frac{2}{3}$

11. Find the area inside the limaçon $r = 4 + 2\cos\theta$.

12. Find the area inside $r = 2\cos\theta$ and outside $r = 1$. 1.913

13. Find the area inside the lemniscate $r^2 = 6\cos 2\theta$ and outside the circle $r = \sqrt{3}$.