Math102 Name:

Quiz#1 ID No:

Code 001 Serial No:

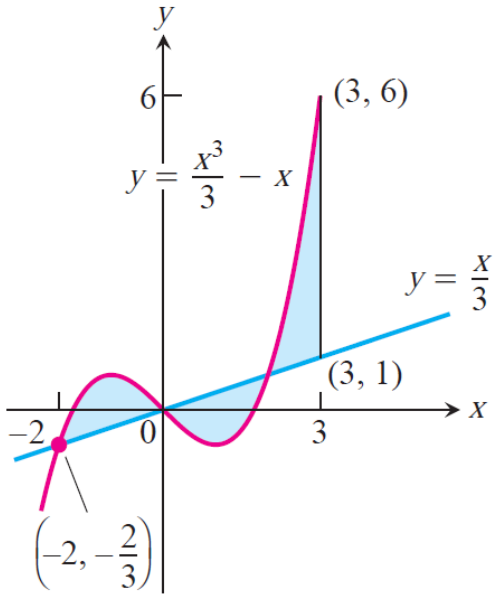
1- If $y(x) = \int_{\sqrt{x}}^{0} \sin(t^2)\, dt$, find $\frac{dy}{dx}$

2- Evaluate $\int \frac{1}{\sqrt{x}e^{-\sqrt{x}}} \csc(e^{\sqrt{x}} + 1) dx$

3. Find the value of the following limit:

$$\lim_{n\to\infty}\left\{\sum_{i=1}^{n}\left[\left(\frac{\pi}{n}\right)\left(\cos\frac{i\pi}{2n}\right)^2\right]\right\} \text{ on } \left[0,\frac{\pi}{2}\right].$$

4. Set up the integration formula to find the area of the shaded region below:



Math102 Name:

Quiz#1 ID No:

Code 002 Serial No:

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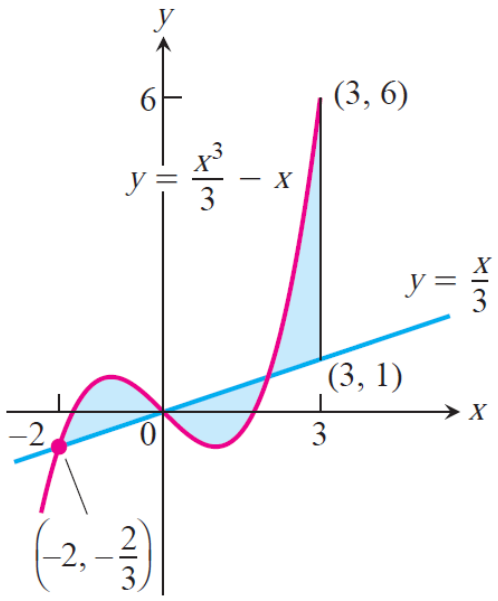
1. Find the value of the following limit:

$$\lim_{n\to\infty}\left\{\sum_{i=1}^{n}\left[\left(\frac{\pi}{n}\right)\left(\cos\frac{i\pi}{2n}\right)^2\right]\right\} \text{ on } \left[0,\frac{\pi}{2}\right].$$

2. Set up the integration formula to find the area of the shaded region below:



3- If $y(x) = \int_{\sqrt{x}}^{0} \sin(t^2)\, dt$, find $\frac{dy}{dx}$

4- Evaluate $\int \frac{1}{\sqrt{x}e^{-\sqrt{x}}} \csc(e^{\sqrt{x}} + 1)dx$