Math 2215 - Calculus 1

Quiz #8 - 2016.09.12

Solutions

Compute the following derivative:

$$\frac{d}{d\theta}\sqrt[3]{\sin(\theta^2-2\theta+1)}$$

$$\begin{aligned}
\frac{d}{d\theta}\sqrt[3]{\sin(\theta^2-2\theta+1)} &= \frac{1}{3\sqrt[3]{(\sin(\theta^2-2\theta+1))^2}}\cdot\frac{d}{d\theta}\sin(\theta^2-2\theta+1) \\
&= \frac{1}{2\sqrt[3]{(\sin(\theta^2-2\theta+1))^2}}\cdot\cos(\theta^2-2\theta+1)\cdot\frac{d}{d\theta}(\theta^2-2\theta+1) \\
&= \frac{1}{2\sqrt[3]{(\sin(\theta^2-2\theta+1))^2}}\cdot\cos(\theta^2-2\theta+1)\cdot(2\theta-2)
\end{aligned}$$