9- Find $\lim_{x \to 0^+} (1+x)^{\ln(\frac{1}{x})}$.

10- Find the exact values of:

a) $\sin^{-1}(\sin(\frac{9\pi}{5}))$ b) $\cot(\cos^{-1}(\frac{1}{3}))$.

11- Find the coordinates of the point on the curve $y = x^{\frac{3}{2}} + 3$ closest to the point $(\frac{5}{2}, 3)$

12- What is $\frac{d}{dx} \int_{\sqrt{x}}^{x^2} \sin(\theta^2)\, d\theta$?

13- Evaluate $\int \frac{x-7}{(x-5)^4}\, dx$.

14- Find the area enclosed by the curves $y = 2x+1$ and $y = x^2 + 4x - 2$.

15- Find the arc length of the curve $y = 2 + \frac{1}{2}\cosh(2x)$ $0 \leq x \leq b$.

16- Find the volume of the solid generated by revolving the region enclosed by the curves $y = 2x$, $y = -x^2$ and $x = 3$ about the y-axis.

17- True or False. If the linear approximation of $f(x) = \sqrt{2x+1}$ at $x = 4$ is used to estimate the value of $\sqrt{9.2}$, then the estimated value is larger than the exact value.