

Present neatly on separate paper. Justify for full credit. No Calculators.

Name _____ Score _____ A (5 minutes)
1)

If $f(x) = \int_0^x (1 - t^2)\cos^2 t dt$, on what interval is f increasing?

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Name _____ Score _____ F (5 minutes)

1)

If $f(x) = \int_0^{\sin x} \sqrt{1+t^2} dt$ and $g(y) = \int_3^y f(x) dx$,
find $g''(\pi/6)$.