## Mathematics 122

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(1) In the following figure label the inflections points.

(2) Find the inflection point of $y=-x^{3}+6 x^{2}-5 x+3$.

Inflection point occurs where $x=$ $\qquad$
(3) Let $C>0$ be a constant and $A=(3 C-r) r^{2}$. Find the value of $r$ with $0 \leq r \leq 2 C$ that maximizes $r$.

Maximum occurs where $r=$ $\qquad$

