## Mathematics 122

$\qquad$
(1) In the figure at which points is the derivative

Positive $\qquad$

Negative $\qquad$

Zero $\qquad$
(2) For the function $f(x)=x(1.3)^{x}$
(a) Find the value of the function at $x=2$. This if $f(2)$

$$
f(2)=
$$

$\qquad$
(b) Find the derivative $f^{\prime}(2)$.

$$
f^{\prime}(2)=
$$

$\qquad$
(c) Find the equation of the tangent line to $y=f(x)$ at the point where $x=2$

