## Mathematics 122

## Quiz \#17

Name: $\qquad$

Compute the following derivatives. In these problems $a, b$, and $c$ are constants.
(1) $y=3 x e^{x}$

$$
y^{\prime}=
$$

$\qquad$
(2) $A=6 r e^{r^{2}}$

$$
\frac{d A}{d r}=
$$

$\qquad$
(3) $w=\sqrt{z} e^{2 z}$

$$
\frac{d w}{d z}=
$$

$\qquad$
(4) $C(q)=\frac{3 q}{1+2 q}$

$$
C^{\prime}(q)=
$$

$\qquad$
(5) $F(t)=\frac{e^{t}}{2+e^{t}}$

$$
F^{\prime}(t)=
$$

$\qquad$

