$(\ ) = - - \quad (\quad)$

$(\ )$

$+ \quad + (\ - \quad)$

$> \quad (\ ) \quad (\ ) = \ - \quad < \quad (\ )$

$(\ ) = \ - \quad (- \ )$

$(\ ) = \ - \quad (\quad) \quad (\ +\infty)$

$(\ ) \quad = \quad (\ ) = \quad - \quad + \quad + (\ - \quad)$

$(\quad - \ ) + \quad + \quad \frac{+ \quad +}{} \quad -$

$(\ ) = \frac{+ \quad +}{} \quad \in (\quad +\infty)$

$' (\ ) = \frac{(\quad + \ ) \quad - (\quad + \quad + \quad)}{} = \frac{- \quad + (\quad - \ ) \quad - \quad +}{} = \frac{(- \quad + \quad - \ )(\ - \ )}{}$

$> \quad - \frac{}{} <$

$< \quad - \frac{}{} \quad < \quad < \quad ' (\ ) > \quad (\ ) \quad (\quad)$

$> \quad ' (\ ) < \quad (\ ) \quad (\ +\infty)$

$(\ ) \quad = \quad (\ ) = \frac{+}{} \quad (\ ) \quad (\ ) \quad (\ ) \quad =$

$\frac{+}{} \quad \frac{}{} \quad < \quad \frac{}{}$

$> \quad < \ - \frac{}{} < \quad < \quad < \ - \frac{}{} \quad ' (\ ) < \quad (\ ) \quad \left(\quad - \frac{}{} \right)$

$- \frac{}{} < \quad < \quad ' (\ ) > \quad (\ ) \quad \left(\ - \frac{}{} \quad \right) \quad ' (\ ) < \quad (\ )$

$(\ +\infty) \quad (\ ) = \frac{+}{}$

$\left(\quad \frac{-}{} \right]$

$\frac{+ \quad +}{} \quad - \quad =$

$\frac{}{} \quad < \quad \frac{}{}$

$< \quad \frac{}{}$

$(\ ) = \frac{+\ +}{} \quad \in (\quad +\infty)$

$'(\ ) = \frac{(\quad + \ ) \quad -(\quad + \ + \quad)}{} = \frac{- \quad +(\quad - \ ) \ - \ +}{} = \frac{(- \quad + \quad - \ )(\ - \ )}{}$

$< \quad \frac{}{} \quad > \quad - \quad + \quad - \ <$

$< \ < \quad ' \quad > \quad > \quad ' \quad <$

$(\quad) \quad (\ +\infty)$

$(\ ) \quad = \ (\ ) = \frac{+}{} \quad \frac{+\ +}{} \quad -$

$\left(\quad \frac{}{} \right]$

$< \quad \frac{}{} \quad < \quad \frac{}{}$

$\frac{+\ +}{} + \quad -$

$(\ ) = \frac{+\ +}{} + \quad -$

$'(\ ) = \frac{(\ - \ )\left[\quad +(\ - \ ) \ + \quad \right]}{}$

$< \quad \frac{}{} \quad +(\ - \ ) \ +$

$'(\ ) \quad '(\ )$

$(\ ) \quad (\quad) \quad (\ +\infty)$

$(\ ) \quad = \ (\ ) \quad \left(\quad \frac{}{} \right]$

$< \quad \frac{}{} \quad < \quad \frac{}{}$

$< \quad \frac{}{} \quad \frac{+\ +}{} \quad \frac{- \quad + \quad + \quad -}{}$

$(\ ) = \frac{(\ - \ ) \quad + \quad +(\ - \ )}{} \quad \in (\quad +\infty)$

$'(\ ) = \frac{-(\ - \ ) \quad + \ (\ - \ ) \ - \ +}{} = \frac{-(\ - \ )\left[(\ - \ ) \ -(\ - \ )\right]}{}$

$< \ < \quad '(\ ) > \quad > \quad '(\ ) <$

$(\ ) \quad (\quad) \quad (\ +\infty)$

( ) = ( ) = ( )

$\frac{+ \quad +}{\quad}$ < —— $\frac{+ \quad +}{\quad}$ −

$\left(\quad \frac{}{} \right]$

+ $+\left(- \quad \right)$ − − <

$\frac{+\left(- \quad \right)}{- \quad -}$

− =

$\frac{+\left(- \quad \right)}{- \quad -}$ $\frac{(-)+\left(- \quad \right)}{- \quad -} = \frac{-}{+}$ =

$(\ ) = \frac{-}{+}$ $\in (\quad +\infty)$ $'(\ ) = \frac{(-)\left[\ (-) \qquad \right]}{\left(\quad + \right)}$

$(\ ) = \ (-)$

$'(\ ) =$ $(\ )$ $(\quad +\infty)$ $(\ ) > (\ ) =$

< < $'(\ ) <$ > $'(\ ) >$

$(\ )$ $(\quad)$ $(\quad +\infty)$ $(\ ) = (\ ) \frac{-}{\quad}$

= $= \frac{+\left(- \quad \right)}{- \quad -}$ $\frac{-}{\quad}$

$\left(\quad \frac{}{} \right]$

$\frac{+\left(- \quad \right)}{- \quad -}$

− =

$(\ ) = \frac{+\left(- \quad \right)}{+} (\qquad)$

$'(\ ) = \frac{(-)\left\{ \ \left[(-) \quad + \quad + - \right] + \ + \right\}}{\left(\quad + \right)}$

− $\frac{-}{\quad}$ − $(-)$ $\frac{(-)}{\quad}$

$(-)$ $+ - +$ $\frac{-(-)}{\quad} +$ $'(\ )$ $(\ )$ $(\quad)$

− $(-)$ $(-)(-) = - \ + \ -$

$(-)$ $+ - +$ $+ - -$ $'(\ )$ $(\ )$ $(\quad +\infty)$

$(\ )$ $(\ ) = \frac{-}{\quad}$ $\frac{-}{\quad}$

$$+(\ -\ )$$

$$-\quad -$$

$$(\ )=\frac{(\ -\ )-}{+}$$

$$-\qquad +\ +\ \qquad +\ +\ (\ \ -\ )$$

$$+\frac{(\ -\ )}{}(\ \ )\qquad +(\ -\ )\ (\ \ )$$

$$(\ )=\frac{(\ -\ )-}{+}\quad \frac{-}{+}\quad \frac{+(\ -\ )\ -}{+}=\frac{-}{}+\frac{(\ -\ )(\ -\ )}{(\ \ +\ )}\quad \frac{-}{}$$

$$=\qquad (\ )\ =\frac{-}{}$$

$$=$$

$$+\ >$$

$$+\qquad +(\ -\ )\qquad +\ (\ \ +\ )+(\ -\ )$$

$$(\ )=\quad +\ (\ \ +\ )+(\ -\ )\qquad \in(\ \ +\infty)$$

$$'(\ )=\left(\quad +--\ \ -\right)+(\ \ )\ +$$

$$\varphi(\ )=\left(\quad +--\ \ -\right)+(\ \ )\ +\qquad \varphi'(\ )=\left(\quad +----\ \ -\right)+\ -$$

$$-\qquad -\quad -$$

>IPV

$(\;)$ $+$ $+(\; - \;)$