What is the maximal value of the function $h(x,k,r)$ defined by

$$h(x,k,r) \coloneqq \frac{1-x}{\left(1-\frac{1}{2}x\right)} \frac{1}{\left(r\frac{1+x+k}{2}+(1-r)\frac{2x+k}{2}\right)}$$

Under the following constraints:

$$x\epsilon[0,1]$$
$$k\epsilon[0,1-x]$$
$$r\epsilon(0,1)$$
$$0 \geq -8(2-x)(1-x)^2 - 2k\left(1-\frac{1}{2}x\right)\left(\frac{r}{(1-r)}\frac{1+x+k}{2}+\frac{2x+k}{2}\right)+(2-x)^2 2\left(1-\frac{1}{2}x\right)\left(\frac{1+x+k}{2}+\frac{(1-r)}{r}\frac{2x+k}{2}\right)(1-x-k)$$