Solve the equation

$$-\frac{\log(-x)}{\log(5)}+\frac{\log(x^2-12)}{\log(5)}=0$$

Rewrite the equation as

$$\frac{1}{\log(5)}\left(-\log(-x)+\log\left(x^2-12\right)\right)=0$$

Solve the equation

$$-\log(-x)+\log\left(x^2-12\right)=0$$

Rewrite the equation as

$$\log\left(x^2-12\right)=\log(-x)$$

Therefore we get

$$x^2-12=-x$$

Solve the equation

$$x^2+x-12=0$$

This equation is quadratic The discriminant is

$$D=49$$

Use the formulas

$$x=\frac{1}{2}\left(-1+\sqrt{49}\right)$$

$$x=\frac{1}{2}(-7-1)$$

Therefore the roots of this quadratic equation are

$$x=3$$

$$x=-4$$