Given:

S-route

V-speed of boat

t-time

x-speed of stream

S=36

V=12

t=$6\frac{29}{60}$ hours

Solution:

$$\frac{S}{V-x}+\frac{S}{V+x}=t$$

$$\frac{36}{12-x}+\frac{36}{12+x}=\frac{389}{60}$$

$$\frac{36(12+x)+36(12-x)}{(12-x)(12+x)}=\frac{389}{60}$$

$$\frac{864}{(12-x)(12+x)}=\frac{389}{60}$$

$$389(12-x)(12+x)=51840$$

$$144-x^2=133.27$$

$$x^2=10.726$$

1) $x=3.275$
2) $x=-3.275$ – not suitable

Answer: speed of stream is 3.275 km/h.