R1

Vin

R2

OPAMP

−

0

OUT Vo

Vin

Vin

+

Vin

I

C

Assuming ideal OpAmp (No currents in, and voltage at both input ports are the same):

$$I = \frac{Vin - Vo}{Zc} = \frac{Vo - Vin}{R2} = \frac{Vin}{R1}$$

Using the last two terms:

$$Vo = Vin\frac{R1 + R2}{R1}$$

Combining this with the first term:

$$I = \frac{Vin - Vin\left(\frac{R1 + R2}{R1}\right)}{Zc} = -Vin\left(\frac{R2}{R1 * Zc}\right)$$

Thus:

$$\frac{Vin}{I} = Zin = -\frac{R1 * Zc}{R2}$$

So, when R1 = R2,

$$\boxed{Zin = -Zc}$$