

# Quiz 7.2: Nullclines of AdEx

## w-Nullcline

0 points possible (ungraded)  
 The AdEx model can be described with the following dynamical system:

$$\tau \frac{du}{dt} = -(u - u_{rest}) + \Delta \exp\left(\frac{u - \vartheta}{\Delta}\right) - R w + R I(t)$$

$$\tau_w \frac{dw}{dt} = a(u - u_{rest}) - w$$

What is the qualitative shape of the  $w$ -nullcline

☐ constant

☒ linear, slope  $a$

☐ linear, slope 1

☐ linear + quadratic

☐ linear + exponential



Submit

You have used 1 of 1 attempt

✓ Correct

## u-Nullcline

0 points possible (ungraded)  
 Consider the dynamical system of the previous question.

What is the qualitative shape of the  $u$ -nullcline

☐ linear, slope 1

☐ linear, slope  $\frac{1}{R}$

☐ linear + quadratic

☒ linear  $w$ , slope  $\frac{1}{R}$  + exponential



Submit

You have used 1 of 1 attempt

✓ Correct