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## Quiz 4.5: Input Current

## **Short Current Pulses**

0 points possible (ungraded)
In a 2-dimensional neuron model,

$$aurac{du}{dt}=F\left( u,w
ight) +RI\left( t
ight)$$

$$aurac{dw}{dt}=G\left(u,w
ight)$$

the effect of a delta current pulse can be analyzed

- by moving the u-nullcline vertically upward
- by moving the w-nullcline vertically upward
- as a potential change in the stability or number of the fixed point(s)
- as a new initial condition 🗸
- $lap{\hspace{-0.1cm}\checkmark\hspace{-0.1cm}}$  by following the flow of arrows in the appropriate phase plane diagram  $lap{\hspace{-0.1cm}\checkmark\hspace{-0.1cm}}$

X

Submit

You have used 1 of 1 attempt

• Answers are displayed within the problem

## **Constant Current**

0 points possible (ungraded)
In a 2-dimensional neuron model,

$$aurac{du}{dt}=F\left( u,w
ight) +RI\left( t
ight)$$

$$aurac{dw}{dt}=G\left(u,w
ight)$$

the effect of a constant current pulse can be analyzed

- by moving the u-nullcline vertically upward (a slight deformation of the nullcline is possible) 🗸
- by moving the u-nullcline vertically upward (any deformation of the nullcline is excluded)
- by moving the w-nullcline vertically upward
- $lap{\hspace{0.1cm}}$  as a potential change in the stability or number of the fixed point(s)  $lap{\hspace{0.1cm}}$
- as a new initial condition
- lacksquare by following the flow of arrows in the appropriate phase plane diagram lacksquare