

# Bellwork 8/23 (5 Minutes)

## [Linear Models]

On an arbitrarily chosen Planet X, the average global temperature ( $Q_{\text{avg}}$ ) is currently increasing at a rate of  $0.156^{\circ}\text{C}$  per decade. Right now, the planet's average global temperature is at  $21.4^{\circ}\text{C}$ .

- 1 Write an equation that models the average global temperature of Planet X in  $t$  decades from now.
- 2 Using your linear model, approximate the amount of time it will take for the planet to exceed a  $Q_{\text{avg}}$  of  $25^{\circ}\text{C}$ .

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