

PREDATOR/PREY

#1

FOR BOTH RABBITS AND FOXES

PERIOD IS 120 WEEKS, SO $K = \frac{2\pi}{120} = \frac{\pi}{60}$

RABBIT FUNCTION

$$y = 1500 \sin\left(\frac{\pi}{60}T\right) + 2000$$

FOXES FUNCTION

$$y = -800 \cos\left(\frac{\pi}{60}(T-10)\right) + 1200$$

OR

$$y = 800 \sin\left(\frac{\pi}{60}(T-40)\right) + 1200$$

#3

FOR BOTH HAKE AND REOFISH
PERIOD IS 180 DAYS, SO $k = \frac{2\pi}{180} = \frac{\pi}{90}$

REOFISH FUNCTION

$$y = 1000 \cos\left(\frac{\pi}{90}T\right) + 2000$$

HAKE FUNCTION

$$y = 500 \cos\left(\frac{\pi}{90}(T-30)\right) + 1000$$

