

11. a) $u_{n+1} = 0.75u_n + 500$ ✓

b) i. $L = \frac{b}{1-a} = \frac{500}{0.25} = 2000$ insects. ✓

ii. yes because limit < 2100 . ✓

12. $y = 4\sin x$
 $\frac{dy}{dx} = 4\cos x$

13 a) $y = 3\sin 2x - 1$ ✓ # ✓ ✓

