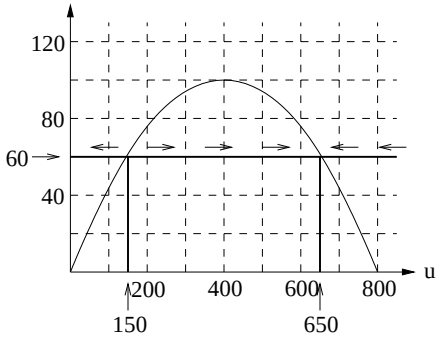
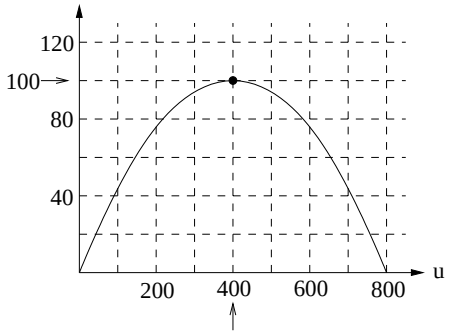
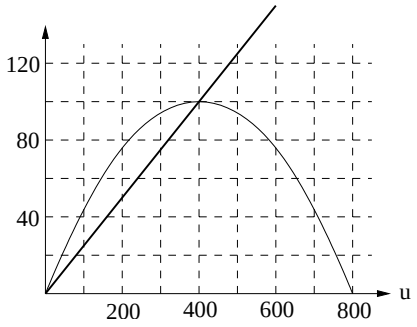
1. (a) The stable equilibium occurs at a population of 650.



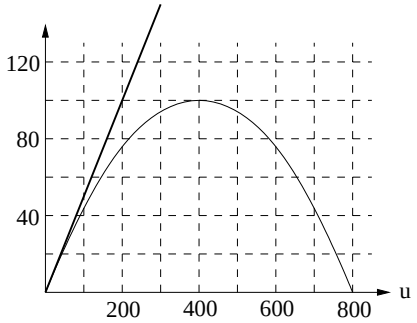
(b) The minimum viable population is 150.



(c) The maximum constant sustainable harvest is 100 at an equilibrium population of 400.



(d) Let h be the harvest. The line drawn goes through the points $(0, 0)$ and $(400, 100)$ so has slope 0.25 and equation $h = 0.25u$. Thus we can maximize the sustainable harvest by harvesting 25% of the population.



(e) Let g be the growth. The line drawn goes through the points $(0, 0)$ and $(200, 100)$ so has slope 0.5 and equation $g = 0.5u$. Thus the intrinsic growth rate is 50%.