

$Q = 1/3(150 - P)$
 $Q = -1/3P + 50$
 Division
 $x_1 = 150 + \frac{1}{3}(55 - 150)$
 $R_1 = 450$
 $P_1 = 225 + \frac{2}{3}(225 - 225)$
 $R_1 = 400$
 $R = (450, 400)$
 $y = mx + b$
 $a = \frac{y_2 - y_1}{x_2 - x_1} = \frac{400 - 150}{55 - 150}$
 $= \frac{250}{-95} = -\frac{50}{19}$
 $400 = -\frac{50}{19}x + b$
 $225 = -\frac{50}{19}(150) + b$
 $225 = -\frac{7500}{19} + b$
 $225 + \frac{7500}{19} = b$
 $225 + 394.74 = b$
 $620 = b$
 $Q = -\frac{50}{19}x + 620$
 $PR = -\frac{50}{19}x + b$
 $400 = -\frac{50}{19}(450) + b$
 $400 = -\frac{22500}{19} + b$
 $400 + \frac{22500}{19} = b$
 $400 + 1184.21 = b$
 $1584 = b$
 $PR = -\frac{50}{19}x + 1584$
 $y = \frac{11}{3}(0) + 40$
 $0 = 11(0) + 40$
 $0 = 40$
 $P_2 = P = (0, 110)$

Oct 15-2:54 PM