Linear Word Problems Solutions

1. a. \( y = 50x + 25 \)  
   b. \( y \)- int: (0, 25), The cost for 0 hours is $25. This is a flat fee. 
   c. \( m = 50 \); The company chargers $50 per 1 hour

2. a. \( x \): amount at $5 per lb  
   \( y \): amount at $6 per lb; \( 5x + 6y = 60 \)  
   b. (12,0); You can buy 12 lbs at $5 per lb and 0 lbs at $6 per lb for $60.

3. a. 500, 550, 600, 650  
   b. Joe’s salary is increased by $50 per 1 year.  
   c. \( y - 550 = 50(x - 2) \); and \( y = 50x + 450 \)

4. a. 25, 45, 65, 85, 105, 125, 145, 165  
   b. \( m = 20 \); The charge is $20 per 1 hour.  
   c. \( y \)- int: (0, 25); The charge is $25 for 0 hours of labor. This is a flat fee.