Pg 39 #11.

Let e represent mass
of 80% silver.

Let s represent the mass
of 66% silver.

① e + s = 30

② 0.8e + 0.66s = 0.7(30)

→ 0.8e + 0.66s = 21

③ Isolate e in Eqn ①

e = 30 - s

sub ③ into ②

③ $e = 30 - s$

② $0.8e + 0.66s = 21$

$0.8(30-s) + 0.66s = 21$

$24 - 0.8s + 0.66s = 21$

$24 - 0.14s = 21$

$\cancel{24} - \cancel{24} - 0.14s = 21 - 24$

$-0.14s = -3$

$s = \dfrac{-3}{-0.14}$

$s = 21.4$

$e = 30 - s$
$= 30 - 21.4$
$e = 8.6$

∴ Wayne should use 21.4g of 66%
silver and 8.6g of 80% silver.

Work

Pg 40 # 12, 14, 15, 17, 19

Quiz Monday
   Solving by graphing
   Solving by substitution

Pg. 40 # 12

   Breakeven point (Revenues = cost)

Revenues → money in

Costs → money out

Let r represent revenue

Let c represent costs

Let n represent # of lawns cut.

① $R = 20n$

② $C = 1n + 665$

$R = C$

∴ $20n = 1n + 665$

Solve for n

$20n - 1n = \cancel{1n} - \cancel{1n} + 665$

$19n = 665$

$n = \dfrac{665}{19}$

$n = 35$

∴ Sue has to cut 35 lawns to break even.