

## Assignment #15: Mixed Simple Interest Investments

Example: Christina's investment in SeaFirst at 3% is \$500 more than her investment in FranBank™ at 5%. She earns \$120 in simple interest in the first year. How much does she have invested in FranBank™?

Solution: Not that anyone should get too reliant on charts like the ones we've been using, but they do help to organize your thoughts. Let's try this:

	<b>Amount</b>	<b>%</b>	<b>Interest earned</b>
<b>SeaFirst</b>	$x+500$	.03	$.03(x+500)$
FranBank™	$x$	.05	$.05x$
<b>MIXTURE</b>			120

Our equation comes from the usual logic of adding the right hand column:

$$.03(x+500) + .05x = 120$$

### Problems

1. Widgets cost \$80 apiece and plodgets cost \$64 apiece. One day Elana sold 43 of these items and collected \$2880. How many of each item did she sell?
2. How much butter (17¢ per lb) should Kevin mix with 3 lbs of flies (12¢ per lb) to get Butterflies™ worth 14¢ per lb?
3. Shalese wants to mix a 30% solution with a 22% solution to get 7 gallons of a 28% solution. How much should she use of each?

4. Blake wants to mix a 40% solution with a 32% solution to get 16 gallons of a 28% solution. How much should he use of each?
5. Jenny's investment in Purina at 2% is \$300 more than her investment in Riskibonds™ at 5%. She earns \$20 in simple interest in the first year. How much does she have invested in Riskibonds™?