Let r = 1 ruby, s = 1 sapphire, p = 1 pearl, d = 1 diamond.
The four jewellers started with: $8r,\ 10s,\ 100p,\ 5d$

After exchanging gifts they had: $5r+s+p+d,\quad 7s+r+p+d,\quad 97p+r+s+d,\quad 2d+r+s+p$
Using the associative law, this can be rewritten as:

$$4r+(r+s+p+d),\quad 6s+(r+s+p+d),\quad 96p+(r+s+p+d),\quad d+(r+s+p+d)$$

Simplify to get $4r,\ 6s,\ 96p,\ d$ and these are all equal (given).
Construct a table:

$r=\frac{3s}{2}$	$s=\frac{2r}{3}$	$p=\frac{r}{24}$	$d=4r$
$r=24p$	$s=16p$	$p=\frac{s}{16}$	$d=6s$
$r=\frac{d}{4}$	$s=\frac{d}{6}$	$p=\frac{d}{96}$	$d=96p$

We have now calculated the relative value of each gem. To avoid fractions, and make it neater, express everything in terms of p. Using this, we can work out how much each jeweller gained or lost.

	Start value in pearls	End value in pearls	Gain in pearls
Ruby collection	$8r=192p$	$4r+(r+s+p+d)=233p$	$233-192=+41p$
Sapphire collection	$10s=160p$	$6s+(r+s+p+d)=233p$	$233-160=+73p$
Pearl collection	$100p$	$96p+(r+s+p+d)=233p$	$233-100=+133p$
Diamond collection	$5d=480p$	$d+(r+s+p+d)=233p$	$233-480=-247p$

At the start, the collections were worth: $480p>192p>160p>100p \quad \therefore \quad 5d>8r>10s>100p$
But at the end the values were all equal.

Therefore the pearl collector, which started out with the lowest relative value, gained the most; and the diamond collector, who started out the highest, lost the most.
The gains are: $133>73>41>-247$, therefore:
$\text{pearl collector's gain} > \text{sapphire collector's gain} > \text{ruby collector's gain} > \text{diamond collector's gain}$

$(r+s+p+d)=137p$ and 137 is prime. After the gem swaps are complete, each collection is worth $233p$, and 233 is prime. 41 is prime as is 73.

I wanted to calculate a percentage increase or decrease in value, but you don't end up with a neat solution. I thought about substituting a value for k into the equations, but the relationships remain the same. If you leave the percentage in (equivalent) fraction form, it doesn't change the result.

So for fun, I broke it down using simple addition and subtraction, but still using pearls as a common base:

	$8r$	$10s$	$100p$	$5d$
Equivalent pearl value at the start	$192p$	$160p$	$100p$	$480p$
Ruby exchange	$-72p$	$+24p$	$+24p$	$+24p$
Value after Ruby swap	$120p$	$184p$	$124p$	$504p$
Sapphire exchange	$+16p$	$-48p$	$+16p$	$+16p$
Value after ruby and sapphire swap	$136p$	$136p$	$140p$	$520p$
Pearl exchange	$+p$	$+p$	$-3p$	$+p$
Value after ruby, sapphire and pearl swap	$137p$	$137p$	$137p$	$521p$
Diamond exchange	$+96p$	$+96p$	$+96p$	$-288p$
Equivalent pearl value at the end	$233p$	$233p$	$233p$	$233p$

It's easy to see how the values equalise.