Review quesons:

1. A set consisng of all elements belonging to any of the sets combined with the symbol $\cup$ is called the union of the sets.

2. A set consisng of only the elements that are common to all sets combined with the symbol $\cap$ is called the intersection of the sets.

3. State the associave property for addion of real numbers.

$(a+b)+c = a+(b+c)$

4. State the commutave property of mulplicaon.

$ab = ba$

5. State the mulplicave inverse of a real number a.

$\frac{1}{a}$

6. State the distribuve property of real numbers.

$a(b+c) = ab+ac$

Assoc. Mult.
$a(bc) = (ab)c$

11.

stamp	#	value/stamp	total value
3¢	x	.03	$.03x$
8¢	$2x-3$	.08	$.08(2x-3)$
13¢	$2(2x-3)$	.13	$.13(2(2x-3))$

$$2.53 = .03x + .08(2x-3) + .13(2(2x-3))$$

17. x , $10-x$

x , y

$x+y=10$

$y=10-x$

$3(10-x)=8(\quad x \quad)-3$

$30-3x=8x-3$

$33=11x$

$\boxed{3}=x$ $\qquad 10-x=\boxed{7}$

7.

stamp	#	value	total value
15¢	$3x-8$	$.15$	$.15(3x-8)$
20¢	x	$.20$	$.20x$

$$.20x + .15(3x-8) = 4$$

$$.20x + .45x - 1.2 = 4$$

$$.65x = 5.2$$

$$65x = 520$$

$$x = 8$$

8 20¢ stamps
16 15¢ stamps

$3(8) - 8$

$$65 \overline{)520} = 8$$
-520
0

9

coin	#	value	total
nickel	$25-4x-x$	.05	
dime	$4x$	.1	
quarter	x	.25	

23.

$x, x+1, x+2$

$x + x+1 + x+2 = -57$

$3x = -60$

$x = -20$

$-20, -19, -18$

2.3 Value Mixture & Motion

4.

coffee	amount (weight)	cost per pound	total cost
$5.50	x	5.5	$5.5x$
$3.00	$40-x$	3	$3(40-x)$
$4 blend	40	4	$4(40)$

$$5.5x+3(40-x)=4(40)$$

$$5.5x+120-3x=160$$

$$2.5x=40$$

$$25x=400$$

$$x=16$$

16 lb of $5.50 coffee

24 lb of $3 coffee

10.

metal	amount	cost per unit	total cost
pure silver	x	5.2	$5.2x$
\$2.80 alloy	50	2.8	$2.8(50)$
\$4.40 alloy	$50+x$	4.4	$4.4(50+x)$

$$5.2x + 2.8(50) = 4.4(50 + x)$$

$$5.2x + 140 = 220 + 4.4x$$

$$0.8x = 80$$

$$8x = 800$$

$x = 100$ oz. of pure silver

18. Uniform Motion
rate x time = distance

skier's	rate	time	distance
faster	$x+14$	$\frac{1}{2}$	$\frac{1}{2}(x+14)$
slower	x	$\frac{1}{2}$	$\frac{1}{2}x$

$$\frac{1}{2}x + \frac{1}{2}(x+14) = 48$$

26.

plane	rate	time	distance
1	x	4	4x
2	x+150	3	3(x+150)

$3(x+150) = 4x + 250$

Homework: odd problems from this section

Note: test next wednesday - take a look at the old Test #1 on my web site!