Chapter 1 Homework

1.1 #1-137 odd

1.2 #97-113 odd

1.3 #30-57 odd; 97-105 odd; and study properties!

1.4 #1-31 odd

Chapter 2 Homework

2.1 #39-77 odd

2.2 #7-27 odd

2.3 #7-25 odd

2.4 #5,7,11,17,19,23,27

2.5 #35-71 odd

2.6 #33-69 odd

Chapter 1 Homework

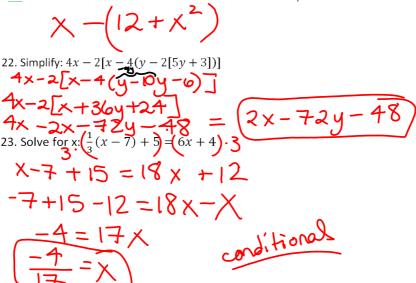
Today!

Today!

Test #1 - Tues. 9/1?

21. Translate into a variable expression. Do <u>not</u> simplify.

" $\underline{\underline{\text{the}}}$ difference between a number and the total of twelve and the square of the number"



18. Two jet skiers leave the same dock at the same time and travel in opposite directions. One skier is traveling 14 mph slower than the other skier. In half an hour the skiers are 48 miles apart. Find the rate of the slower skier.

rate·time =	
distance	

Skier	Rate	Time	Distance
Slower	X	1/2	メ・ユ
Faster	X+14	1/2	(x+14).=



$$2 \times (x + 14) \cdot 2 = 2 \times = 82 \times = 41 \text{ mph}$$

26. A plane leaves an airport at 3 p.m. At 4 p.m. another plane leaves the same airport traveling in the same direction at a speed 150 mph faster than that of the first plane. Four hours after the first plane takes off, the second plane is 250 mi ahead of the first plane. How far did the second plane travel?

a .			
Plane	Rate	Time	Distance
1	X-250	4	X-250
2	<u>×</u> 3	3	X
X-25	× +15	50) = ().12
3(x-z	50) + 1	50(12)	=4x
3×-7	150 +	1800 =	=4x
	1050 = Mileu	X	

$$r.t = d$$

$$r = \frac{d}{t}$$

2.4 Problems Involving Percent

Important formulas:

principal x interest rate = interest earned (original investment \$) (% written as decimal) (\$)

amt of solution x (volume of water mixed

with dissolved substance)

% concentration = (portion of solution that is the dissolved substance)

amt of substance (volume of just dissolved substance)

\$9600. How much is invested in each account?

type of interest original invants

5.5% 0.055 \times 0.055 \times 4.5% 0.045 $9600 - \times$ 0.045 $(9600 - \times)$ (0.055 \times +0.045 $(9600 - \times)$ =(465).1000

55 \times +45(9600) -45 \times =465000

10 \times =465000 -45(9600)0 \times =465000 -45(9600)

6. Two investments earn an annual income of \$465. One investment is a 5.5% tax-free annual simple interest account, and the other is a 4.5% annual simple interest certificate of deposit. The total amount invested is

18. A chemist mixed 100 ml of an 8% saline solution with 60 ml of a 5% saline solution. Find the percent concentration of the resulting mixture.

type	ant of solution	concentration	ant. of substance
82	100 mL	80.0	100 (0.08)
52	60 mL	0.05	60 (0.05)
Mixture	160mL	X	160×
100/- \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \			
8 + 3 = 160x $11 = 160x$ $11 = 160x$ $100(0.08) + 60(0.05) = 160x$ $100 = 0.06875$			
11	11=160	5 x i	60 (6.9%)
165	$=\chi$		

26. How much water must be evaporated from 10 gal of a 12% sugar solution in order to obtain a 15% sugar solution?

Solution in or	dei to obtaill a 15 % sug	ai solulion:	1. C
ting	ome of Solution	concudration	ont of substance
122	lO gal	0.12	10 (0.12)
water	X	0	0
152	10-X	0.15	(10-x)·0.15
10(0.12) = (10-x)(0.15)			
1.2 = 1.5 -0.15X			
0.15x = 0.3			
15x=30			
X = 30 = 2 gallons of water			
		-	

A cashier has \$730 in twenty-dollar bills and five-dollar bills. In all, the cashier has 68 bills. How many twenty-dollar bills does the

cashier have	/e? #of bills	worther	total value
\$20	X	20	20 x
\$ 5	68-X	5	5(69-x)
$20x + 5(68 - \chi) = 730$			
X=26 \$20 bills			

2.5 Inequalities in One Variable

$$5x + 2 \ge 4x - 1$$

$$5x - 4x \ge -1 - 2$$

$$5x \left(x \ge -3 \right)$$

$$-3$$

$$-3$$

26.
$$2-5(x+1) \ge 3(x-1)-8$$

 $2-5x-5 = 3x - 3 - 8$
 $-3-5x = 3x - 11$
 $-3+11 = 3x + 5x$
 $8 \ge 8x$
 $1 \ge x$
 $\{x \mid x \le 1\}$ (- ∞ ₃]