

2.3

5.

	#	cost/	total
adult	$x$	5	$5x$
child	$460-x$	2	$2(460-x)$

$$1880 = 5x + 2(460 - x)$$

17.

	rate	time	distance
slower plane	$x$	1.5	$1.5x$
faster plane	$x+80$	1.5	$1.5(x+80)$

$$1380 = 1.5x + 1.5(x+80)$$

7.

pure	50	9.5	$50(9.5)$
imitation	$x$	4	$4x$
mixture	$50+x$	5	$5(50+x)$

$$50(9.5) + 4x = 5(50+x)$$

## 2.4 Problems involving 2

Interest:

	Principal (initial investment)	interest rate (decimal)	= interest earned
6.	$x$	0.055	$0.055x$
5.5%	$9600 - x$	0.045	$0.045(9600 - x)$
4.5%			

$$465 = 0.055x + 0.045(9600 - x)$$

10.	principal	% interest rate	total interest
3.5%	$x$	0.035	$0.035x$
4.5%	$42,000 - x$	0.045	$0.045(42,000 - x)$

$0.035x = 0.045(42,000 - x)$

18. solution type	amount of solution	% concentration	amount of substance
82 saline	100	0.08	$100(0.08)$
59 saline	60	0.05	$0.05(60)$
mixture	160	X	$160x$

$100(0.08) + 0.05(60) = 160x$

26.	amount sol'n	sg conc.	amount of sugar
12g	10	0.12	$10(0.12)$
water	X	0	0
15g	$10-X$	0.15	$0.15(10-X)$

$$10(0.12) = 0.15(10-X)$$

HW:  
2.4 odds