

Quiz #1

Directions: Please show all work since partial credit is given, and answers without the necessary work will receive no credit. Remember, have fun!

1. Solve the following equations.

+5 a) $-\frac{5}{12}y = \frac{7}{16}$

$y = \frac{-21}{20}$

$-\frac{5}{12}y = \frac{7}{16}$

$y = \frac{7}{16} \cdot \frac{-12}{5}$

$y = \frac{-84}{80}$

$y = \frac{-84 \div 4}{80 \div 4}$

$y = \frac{-21}{20}$

+5 b) $3(x-2)+3=2(6-x)$

$x=3$

$3x-6+3=12-2x$

$3x-3=12-2x$
 $+2x$ $+2x$

$5x-3=12$
 $+3$ $+3$

$5x=15$

$x = \frac{15}{5} = 3$

2. A drawer contains some 22 cents stamps and some 30 cents stamps. The number of 30 cents stamps is six less than twice the number of 22 cents stamps. The total value is \$14.60. Find the number of each type of stamp in the drawer.

	Number	Unit Value	Total Value
22¢	x	22	$22x$
30¢	$2x-6$	30	$30(2x-6)$
Total			1460

$$22x + 30(2x-6) = 1460$$

$$22x + 60x - 180 = 1460$$

$$82x - 180 = 1460$$

$$82x = 1640$$

$$x = \frac{1640}{82}$$

$$x = 20$$

$$2x - 6 = 2(20) - 6$$

$$= 40 - 6$$

$$= 34$$

22 cent: 20 stamps
30 cent: 34 stamps

3. How many ounces of pure silver costing \$11 per ounce must be mixed with 60 oz. of a silver alloy costing \$7.20 per ounce to make an alloy that costs \$9.50 per ounce?

92 ounces + 2 ans

	Amount	Unit Cost	Value
pure	x	11	$11x$
alloy	60	7.20	432
mix	$x+60$	9.50	$9.5(x+60)$

$$11x + 432 = 9.5(x+60)$$

$$11x + 432 = 9.5x + 570$$

$$-9.5x$$

$$-9.5x$$

$$1.5x + 432 = 570$$

$$-432 \quad -432$$

$$1.5x = 138$$

$$\frac{1.5x}{1.5} = \frac{138}{1.5}$$

$$x = 92$$