

DO NOW

Simplify the following:

1) $-5(-a - b) + 5(a + b)$

2) $7(x + 6y) - 4(x - 7y)$

Solve the following:

3) $3(x - 4) = 6(x - 3)$

3.7

Cost, Income, and Value Problems

Name _____ Date _____

3.7 – Cost, Income, and Value Problems

Important formulas:

Cost = number of items X price of item
 Income = hours worked X wage per hour
 Total Value = number of items X value per item

Example A

Tickets for the senior class play cost \$6 for adults and \$3 for students. A total of 846 tickets worth \$3846 were sold. How many student tickets were sold?

	Number	X	Price per ticket =	Cost
Adult				
Student				

Example B

Tickets for a concert cost \$8 for adults and \$4 for students. A total of 920 tickets worth \$5760 were sold. How many adult tickets were sold?

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Adult				
Student				

Solve. Complete the chart first.

1. Forty students bought caps at the baseball game. Plain caps cost \$4 each and deluxe ones cost \$6 each. If the total bill was \$236, how many students bought the deluxe cap?

	Number	X	Price =	Cost
Deluxe	d		?	?
Plain	?		?	?

NAME _____ DATE _____

3-7 Cost, Income, and Value Problems (continued)

Solve. Complete the chart first.

2. Adult tickets for the game cost \$6 each and student tickets cost \$3 each. A total of 1040 tickets worth \$5400 were sold. How many student tickets were sold?

	Number	X	Price =	Cost
Adult				
Student				

3. A collection of 60 dimes and nickels is worth \$4.80. How many dimes are there?
 (Hint: In your equation, use 480¢ instead of \$4.80.)

	Number	X	Value of coin =	Total value
Dimes				
Nickels				

4. A collection of 54 dimes and nickels is worth \$3.80. How many nickels are there?
 (Hint: In your equation, use 380¢ instead of \$3.80.)

	Number	X	Value of coin =	Total value
Dimes				
Nickels	n			

5. Henry paid \$.80 for each bag of peanuts. He sold all but 20 of them for \$1.50 and made a profit of \$54. How many bags did he buy?
 (Hint: Profit = selling price - buying price.)

	Number	X	Price (¢) =	Cost (¢)
Bought	b			
Sold				

6. Paula paid \$4 for each stadium cushion. She sold all but 12 of them for \$8 each and made a profit of \$400. How many cushions did she

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Bought	b			

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6. Paula paid \$4 for each stadium cushion. She sold all but 12 of them for \$8 each and made a profit of \$400. How many cushions did she buy?
 (Hint: Profit = selling price - buying price.)

	Number	X	Price (¢) =	Cost (¢)
Bought	b			
Sold				

Solve. Make and complete a chart first.

7. I have three times as many dimes as quarters. If the coins are worth \$6.60, how many quarters are there?
 8. I have 12 more nickels than quarters. If the coins are worth \$5.40, how many nickels are there?

Mixed Review Exercises

Simplify.

1. $\frac{30 + 5 + 2}{13 - 5}$ 2. $24 + \frac{1}{4}$ 3. $\frac{1}{4}(28y - 12) + 6$
 4. $(-5)(4)(-2)$ 5. $3(2x + 5) + 4(-x)$ 6. $6(x - y) + 5(2y + x)$

Evaluate if $a = 2$, $b = 3$, and $c = 8$.

7. $\frac{3a + b}{c - 5}$ 8. $\frac{bc}{2a}$ 9. $2(c - a) - b + 3$