

Concept: Problem Solving

Name: _____


- You should have completed Equations – Section 5 Part A: Problem Solving before beginning this handout.

Warm Up

Translate the following word statements into symbols.

- (a) ten times a number, increased by four _____
- (b) six less than twice a number _____

COMPUTER COMPONENT

Instructions: In  follow the **Content Menu** path:

Equations > Problem Solving

NOTE: Use the **Menu** button in order to get to the lesson where you left off.



Work through all Sub Lessons of the following Lessons **in order**:

- *Money Problem with Chart*
- *Age Problem with Chart*
- *Buying CDs*

NOTE: You will not be finishing the entire section before stopping to complete some **OFF COMPUTER EXERCISES**.



As you work through the computer exercises, you will be prompted to make notes in your notebook/math journal.

When you reach the end of the lesson *Buying CDs* on the computer, move on to the **OFF COMPUTER EXERCISES** below.

NOTES:
Money Problem with Chart

A drawer contains \$3.05 in quarters and dimes.
 The number of dimes is 11 more than 4 times the number of quarters.

How many dimes and quarters are in the drawer?

	Dimes	Quarters
Number of		
Value of (¢)		

The number of dimes is:

Number of quarters \longrightarrow _____

_____ times the number of quarters \longrightarrow _____

_____ more than _____ times the number of quarters \longrightarrow _____

Value of the dimes:

10 (_____)

Value of the quarters

25 (_____)

Total value of the coins (*Hint: Remember to change the dollars into cents to keep units consistent*)

10 (_____) + 25 (_____) = _____

_____q + _____ + _____q = _____

_____ q + _____ = _____

_____q = _____ - _____

$$\text{_____ } q = \text{_____}$$

$$q = \text{_____}$$

If $q = \text{_____}$ then...

Number of Quarters is $q = \text{_____}$

Number of Dimes is $4\text{_____} + \text{_____} = 4(\text{_____}) + 11$
 $= \text{_____}$

CHECK:

The value of the quarters (_____) $= 25(\text{_____})$
 $= \text{_____}$

The value of the dimes (_____) $= 10(\text{_____})$
 $= \text{_____}$

Total value (_____) $\text{_____} + \text{_____} = \text{_____}$

Age Problem with Chart

Mary is 8 times the age of her daughter

In 4 years she will be 4 Times the age of her daughter plus 4 years

Fill in the chart:

	Present Age	Age in 4 years
Daughter	y	
Mary		

There are two ways to write how old Mary will be in 4 years. *Write the expression for each.*

Current age plus number of years = Four times (daughter age in 4 years) plus 4 years

$$\text{_____} = \text{_____}$$

Solve for y

The daughter is presently _____ years old.

$$\begin{aligned} \text{Mary is presently } ___ y &= ___ (___) \\ &= ______ \text{ years old.} \end{aligned}$$

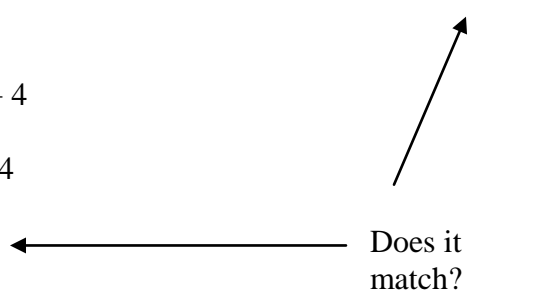
CHECK:

Calculate her daughter's age in 4 years:

$$\begin{aligned} \text{In four years Mary will be 4 times her daughters age plus 4 years} &= 4(___ + 4) + ___ \\ &= ______ + ___ \\ &= ______ \end{aligned}$$

$$\begin{aligned} \text{Mary's age in four years} &= 8(___) + 4 \\ &= ______ + 4 \\ &= ______ \end{aligned}$$

Does it match? _____



Buying CDs

The twins went shopping and spent \$75.56 on 4 CDs and lunch.

They spent \$12.56 for lunch.

The store had a sale on CDs, any CD for the same low price. The store also advertized that they were not charging tax that day! *What is the cost of each CD?*

Write the equation for calculating the cost of the CDs.

6. Dan is four times as old as his brother. Four years from now he will be twice as old as his brother. *How old is Dan's brother now?*
7. Three friends have a total age of 64 years. The oldest is six years older than the youngest and two years older than the second. *Find each of their ages.*
8. Juan has \$1.35 in quarters and pennies. There are 15 coins in all. *How many of each coin does he have?*

9. Jeannette has \$1.15 in nickels and dimes. If the number of dimes is one less than twice the number of nickels, *find the number of nickels.*
10. A father is three times as old as his son. Six years ago, he was five times as old as his son. *How old is the father now?*
11. Crispan and Joan are selling grapefruits. Customers can buy small boxes of grapefruits and large boxes of grapefruits. Crispan sold 3 small boxes of grapefruits and 14 large boxes of grapefruits for a total of \$192. Joan sold 11 small boxes of grapefruits and 11 large boxes of grapefruits for a total of \$220. *Find the cost each of one small box of oranges and one large box of oranges.*

Challenge:

Interesting Fact:

Coffee is the second most traded commodity in the world. Oil is the first.

<http://www.gomestic.com/Consumer-Information/25-Facts-About-Coffee.42195>

12. A coffee café specialty coffee is a mix of coffee blends. A 100 pound order of the specialty coffee uses a mix of some light, medium and dark blends. Twice as much was added from the medium blend than from the light blend. The medium blend was 30 pounds. *How much of the dark blend was used in the 100 pound mix?*