


Related Word Problems 2
Mathematics and Millennials – 6th



Word Problems

Word Problems need to be changed to a visual representation for easy solutions.


Suggestions for **Abstract to Concrete!**

If a Problem has 2 parts use: -----|-----

If a Problem has 3 part use: -----|-----|-----

Symbolic letters **above** Board & Solve!

A	B	X	Y	Z
----- ----- = 10		----- ----- ----- = 18		



Word Problems

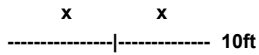
A valuable piece of information for Word Problems:
Many times, it is OK to replace (**than**) with (**and**)!

Weight 1 is 3ft less **than** twice Weight Two!
 Weight 1 is 3ft less **and** twice Weight Two! **2W – 3** W

Height 1 is 5ft more **than** half Height Two!
 Height 1 is 5ft more **and** half Height Two! **H + 5** 2H

Board Problem - 1

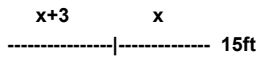
A **10 foot board** is cut into 2 pieces. Each piece is the same length. How long is each piece?



$2x = 10\text{ft}$ $x = 5\text{ft}$ **Check Answer!**
First = 5ft Second = 5ft Board = 10ft

Board Problem - 2

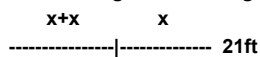
A **15 foot board** is cut into 2 pieces. One piece is 3 ft more than the other. How long is each piece?



$(2x)+3 = 15\text{ft}$ $2x=12\text{ft}$ $x=6\text{ft}$ **Check Answer!**
First = $6+3=9\text{ft}$ Second = 6ft Board = 15ft

Board Problem - 3

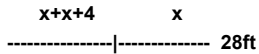
A **21 foot board** is cut into 2 pieces. One piece is twice the other in length? How long is each piece?



$(3x) = 21\text{ft}$ $x=7\text{ft}$ **Check Answer!**
First = $7+7=14\text{ft}$ Second = 7ft Board = 21ft

Board Problem - 4

A **28 foot board** is cut into 2 pieces. One piece is 4 ft more **than** twice the other. How long is each piece?

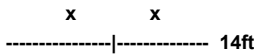


$(3x)+4 = 28\text{ft}$ $3x=24\text{ft}$ $x=8\text{ft}$ **Check Answer!**

First = $8+8+4=20\text{ft}$ Second = 8ft Board = 28ft

Board Problem - 5

A **14 foot board** is cut into 2 pieces. Each piece is exactly the same length. How long is each piece?

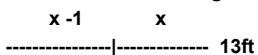


$(2x) = 14\text{ft}$ $x=7\text{ft}$ **Check Answer!**

First = 7ft Second = 7ft Board = 14ft

Board Problem - 6

A **13 foot board** is cut into 2 pieces. One piece is 1 ft less **than** the other. How long is each piece?

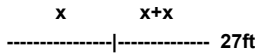


$(2x) - 1 = 13\text{ft}$ $2x=14\text{ft}$ $x=7\text{ft}$ **Check Answer!**

First = $7-1=6\text{ft}$ Second = 7ft Board = 13ft

Board Problem - 7

A 27 foot board is cut into 2 pieces. One piece is half the other in length? How long is each piece?

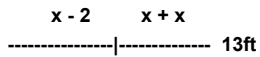


$$(3x) = 27ft \quad x=9ft \quad \text{Check Answer!}$$

First = 9ft Second 9+9 = 18ft Board = 27ft

Board Problem - 8

A 13 foot board is cut into 2 pieces. One piece is 2 less than half other? How long is each piece?



$$(3x) - 2 = 13ft \quad 3x=15ft \quad x=5ft \quad \text{Check Answer!}$$

First = 5-2 =3ft Second = 5+5 =10ft Board = 13ft

Real Problems

Board Images help Visualize Abstract (Word) Problems!
Boards are Simple, Easy and Practical to use!

Essential Skill: Verbal statements into Symbolic visuals

Using the **Board** is a valuable **Problem Solving Tool!**

Real Problem - 1

Tate & Nicole caught 15 Butterflies. Nicole caught 3 more than Tate did. How many did each catch?

$$\begin{array}{r} B+3 \\ B \\ \hline 15 \text{ Butterflies} \end{array}$$

$(2B)+3 = 15$ $2B = 12$ $B = 6$ **Check Answer!**
Nicole caught $6+3=9$ B-flies Tate caught 6 B-flies

Real Problem - 2

Jim & Sue work 33 hours. Jim worked twice as many hours as Sue. How many hours did each work?

$$\begin{array}{r} h+h \\ h \\ \hline 33 \text{ hours} \end{array}$$

$(3h) = 33$ $h = 11$ **Check Answer!**
Jim worked $11+11 = 22$ hrs & Sue worked 11hrs

Real Problem - 3

Pete & Jan created 28 posters. Jan made 4ft more than twice as many as Pete. How posters did each create?

$$\begin{array}{r} p+p+4 \\ p \\ \hline 28 \text{ Booster Posters} \end{array}$$

$(3p)+4 = 28$ $3p = 24$ $p = 8$ **Check Answer!**
(J) created $8+8+4 = 20$ Posters & (P) created 8 Posters

Real Problem - 4

Angie & Dan scored 13 points on a Quiz. Dan scored 1pt less than Angie. How many points did each score?

$$\begin{array}{r} p-1 \\ + \quad p \\ \hline 13 \text{ points} \end{array}$$

$(2p) - 1 = 13$ $2p = 14$ $p = 7$ **Check Answer!**

Dan scored $7-1=6$ pts & Angie scored 7pts

Real Problem - 5

Diane & Steve have 27 baseball cards. Diane has half as many cards as Steve. How cards does each have?

$$\begin{array}{r} c \\ + \quad c+c \\ \hline 27 \text{ Cards} \end{array}$$

$(3c) = 27$ $c = 9$ **Check Answer!**

Diane has 9 cards Steve has $9+9=18$ cards

Real Problem - 6

Lori & Jerry have 13 antique cups. Lori has 2 less than half as many cups as Jerry? How many cups each?

$$\begin{array}{r} c-2 \\ + \quad c+c \\ \hline 13 \text{ antique cups} \end{array}$$

$(3c) - 2 = 13$ $3c = 15$ $c = 5$ **Check Answer!**

Lori has $5-2=3$ cups & Jerry has $5+5=10$ cups

Real Problem - 7

Tom & Mary have 23 books. Tom has 2 less than 3/5 as many books as Mary? How many books each?

$$\begin{array}{r} a+a-2 \quad a+a+a \\ \hline \end{array} \quad 23 \text{ books}$$

$(5a)-2=23$ bks $5a = 25$ bks $a = 5$ bks **Check Answer!**
Tom: $5 + 5 - 2 = 8$ books Mary: $5+5+5 = 15$ books

Real Problem - 8

Joe & Sue have 20 merit awards. Joe has 4 more than 3/5 as many awards as Sue? How many awards each?

$$\begin{array}{r} a+a+a+4 \quad a+a+a+a+a \\ \hline \end{array} \quad 20 \text{ awards}$$

$(8a)+4=20$ $8a = 16$ $a = 2$ **Check Answer!**
Joe: $2+2+2+4=10$ awards Sue: $2+2+2+2+2=10$ awards

Conclusion
