

**Numbers 3 & Word Problems**  
*Mathematics and Millennials – 6th*

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**Word Problems**

**Word or Verbal** Problems supplement Computations and provide needed extensions into the **Real World!**

A path designed for **Success & Confidence** is critical!  
Beginning Word Problems **must not be hurried!**

Word Problems augmenting **Number & Decimal Facts** provide expansion & development of **Fundamentals!**

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**(1) Number Problem**

The **Sum** of two numbers is 15. One number is **twice** the other. Determine the two **addends!** Show Work & Check Answers! Use **visual image** to illustrate words!

$A+A$	$A$	
----- -----	-----	<b>Sum = 15</b>
$A+A+A = 15$	$A = \underline{\quad}$	Check Answer!
$\underline{\quad} + \underline{\quad} = 10$	$\underline{\quad} = 5$	Checks?

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## (2) Number Problem

The **Difference** of two numbers is 7! The **larger** of the two numbers is 18! Determine the **two numbers**. Show Work & Check! Use **visual image** to represent words!

$$\begin{array}{r} L=18 \quad S=? \\ \hline \end{array} \quad \text{Difference} = 7$$

$18 - S = 7 \quad S = \underline{\quad}$  Check Answer!  
 $18 - \underline{\quad} = 7 \quad$  Checks?

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## (3) Number Problem

The **Product** of two numbers is 49! The **factors** are the same value! Determine the two **factors**! Show Work & Check Answers! Use **visual image** to illustrate words!

$$\begin{array}{r} F \quad F \\ \hline \end{array} \quad \text{Product} = 49$$

$F \times F = 49 \quad F = \underline{\quad}$  Check Answer!  
 $\underline{\quad} \times \underline{\quad} = 49 \quad$  Checks?

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## (4) Number Problem

The **Quotient** of two numbers is 5! The **smaller** of the two **numbers** is 4! Determine the two **numbers**! Show Work & Check! Use **visual image** to represent words!

$$\begin{array}{r} L=? \quad S=4 \\ \hline \end{array} \quad \text{Quotient} = 5$$

$L / 4 = 5 \quad L = \underline{\quad}$  Check Answer!  
 $\underline{\quad} / 4 = 5 \quad$  Checks?

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### (1) Decimal Problem

The **Sum** of two numbers is 4.7! One of the **addends** is 1.2! Determine the two **numbers**! Show Work & Check Answers! Use **visual image** to illustrate words!

$$\begin{array}{r} A=1.2 \quad A=? \\ \hline \text{Sum} = 4.7 \end{array}$$

$$1.2 + A = 4.7 \quad A = \underline{\quad} \quad \text{Check Answer!}$$

$$1.2 + \underline{\quad} = 4.7 \quad \text{Checks?}$$

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### (2) Decimal Problem

The **Difference** of two numbers is .45! The larger of the two numbers is 1.68! Determine two numbers! Show Work & Check! Use **visual image** to represent words!

$$\begin{array}{r} L=1.68 \quad S=? \\ \hline \text{Difference} = .45 \end{array}$$

$$1.68 - S = .45 \quad S = \underline{\quad} \quad \text{Check Answer!}$$

$$1.68 - \underline{\quad} = .45 \quad \text{Checks?}$$

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### (3) Decimal Problem

The **Product** of two decimals is .16! The decimals have the **same value**! Determine the two decimals! Show Work & Check! Use **visual image** to illustrate words!

$$\begin{array}{r} D \quad D \\ \hline \text{Product} = .16 \end{array}$$

$$D \times D = .16 \quad D = \underline{\quad} \quad \text{Check Answer!}$$

$$\underline{\quad} \times \underline{\quad} = .16 \quad \text{Checks?}$$

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#### (4) Decimal Problem

The **Quotient** of two decimals is .2! The **Divisor** of the two decimals is .3! Determine two decimals! Show Work & Check! Use **visual image** to illustrate words!

$$\begin{array}{r} D=? \quad D=.3 \\ \text{-----} | \text{-----} \text{Quotient} = .2 \\ D / .3 = .2 \quad D = \underline{\quad} \quad \text{Check Answer!} \\ \underline{\quad} / \underline{\quad} = .2 \quad \text{Checks?} \end{array}$$

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#### Word Problems

**Word or Verbal** Problems supplement Computations and provide needed extensions into the **Real World!**

A path designed for **Success & Confidence** is critical! Beginning Word Problems **must not be hurried!**

Word Problems augmenting **Proportions & Percentages** provide expansion & development of **Fundamentals!**

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#### (1) Proportion Problem

An Elementary Class of students has a **ratio** of **Boys to Girls** that stands at **2 to 3**. The class has **10 Boys!** How many **Girls** in the class? Show work & Check!

$$\begin{array}{r} 2 \text{ to } 3 = B \text{ to } G \quad 2 \text{ to } 3 = 10 \text{ to } G \\ 2G = 30 \quad G = \underline{\quad} \quad \text{Check!} \\ 2 \text{ to } 3 = 10 \text{ to } \underline{\quad} \quad \underline{\quad} = \underline{\quad} \quad \text{Checks?} \end{array}$$

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## (2) Proportion Problem

A recipe for Chocolate & Raisin cookies has a ratio of **Chocolates to Raisins** being 3 to 4. If **12 Raisins** are in the cookies, how many Chocolates? **Work & Check!**

$$3 \text{ to } 4 = C \text{ to } R \quad 3 \text{ to } 4 = C \text{ to } 12$$

$$36 = 4C \quad C = \underline{\quad} \quad \text{Check!}$$

$$3 \text{ to } 4 = \underline{\quad} \text{ to } 12 \quad \underline{\quad} = \underline{\quad} \quad \text{Checks?}$$

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## (3) Proportion Problem

**Jane and Pete** created posters for a ball game with a ratio of 5 to 4. **Jane** fewer posters and created **10**. How many did Pete make? **Show Work & Check!**

$$5 \text{ to } 4 = J \text{ to } P \quad 5 \text{ to } 4 = 10 \text{ to } P$$

$$5P = 40 \quad P = \underline{\quad} \quad \text{Check!}$$

$$5 \text{ to } 4 = 10 \text{ to } \underline{\quad} \quad \underline{\quad} = \underline{\quad} \quad \text{Checks?}$$

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## (4) Proportion Problem

**Tom and Mary** went fishing and they caught a ratio of 7 to 5. **Mary caught 15 fish** but Tom is a better fisher! How many did Tom catch? **Show work & Check!**

$$7 \text{ to } 5 = T \text{ to } M \quad 7 \text{ to } 5 = T \text{ to } 15$$

$$105 = 5T \quad \underline{\quad} = T \quad \text{Check!}$$

$$7 \text{ to } 5 = \underline{\quad} \text{ to } 15 \quad \underline{\quad} = \underline{\quad} \quad \text{Checks?}$$

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### (1) Percentage Problem

50% of 12 Long Yellow Bananas is how many Long Yellow Bananas! A Percent is a ratio: Number to 100!

Convert Percent Statement to Proportion & Solve!

$$50\% \text{ of } 12 \text{ is } B \quad 50 \text{ to } 100 = B \text{ to } 12$$

$$600 = 100B \quad \underline{\quad} = B \quad \text{Check!}$$

$$50 \text{ to } 100 = \underline{\quad} \text{ to } 12 \quad \underline{\quad} = \underline{\quad} \quad \text{Checks?}$$

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### (2) Percentage Problem

What percent of the number sixteen is 4? These numbers represent length in inches! Percent is a ratio!

Convert Percent Statement to Proportion & Solve!

$$P\% \text{ of } 16 \text{ is } 4 \quad P \text{ to } 100 = 4 \text{ to } 16$$

$$16P = 400 \quad P = \underline{\quad} \quad \text{Check!}$$

$$\underline{\quad} \text{ to } 100 = 4 \text{ to } 16 \quad \underline{\quad} = \underline{\quad} \quad \text{Checks?}$$

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### (3) Percentage Problem

75% of 24 ounces Enriched Orange Drink is water. Orange Drink is healthy! How many ounces is water?

Convert Percent Statement to Proportion & Solve!

$$75\% \text{ of } 24 \text{ is } W \quad 75 \text{ to } 100 = W \text{ to } 24$$

$$1800 = 100W \quad \underline{\quad} = W \quad \text{Check!}$$

$$75 \text{ to } 100 = \underline{\quad} \text{ to } 24 \quad \underline{\quad} = \underline{\quad} \quad \text{Checks?}$$

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#### (4) Percentage Problem

What percent of a \$40 investment is 70 Dollars?  
This appears to be a profitable investment! Maybe?  
Convert Percent Statement to Proportion & Solve!

P% of 40 is 70      P to 100 = 70 to 40

40P = 7000      P = \_\_\_\_      Check!

\_\_\_\_ to 100 = 70 to 40      \_\_\_\_ = \_\_\_\_      Checks?

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**Conclusion**

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