Whole Numbers p. 1

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| **BILLIONS** | **MILLIONS** | **THOUSANDS** | **ONES** |
| hundred billions | ten billions | billions | hundred millions | ten millions | millions | hundred thousands | ten thousands | thousands | hundreds | tens | ones |
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**1.1 Whole Numbers** Math Symbols and Meanings p. 2

6(7) = 42 42/7 = 6

(6)(7) = 42

6 \* 7 = 42

 ( ) parentheses means multiplication / means division

* bullet means multiplication

\* asterisk means multiplication

 Word Bank

 add, altogether, decrease, difference,

 divisor, double, equal, fewer, half,

 how much more, increase,

 less, of, per, plus, product, quotient,

 same as, split up, sum, take away, times, twice, yields

**1.3 Problem Solving**  p. 5

1. Sam is balancing his checkbook. To begin with, Sam has a balance of $441.89 in his checkbook. Sam has written out a check for $23.89 for his water bill and $58.23 for his cell phone bill. Sam has deposited his paycheck of $526.59. Sam has written out a check for $360.00 for rent. Sam has withdrawn $100.00 from an ATM and has been charged a fee of $2.50. What is Sam’s balance?

2. The Blue Harbor Resort has 352 visitors on Monday, 304 visitors on Tuesday, 389 visitors on Wednesday, 417 visitors on Thursday, 466 visitors on Friday, 490 visitors on Saturday, and 475 visitors on Sunday. How many people visited the Blue Harbor Resort altogether from Monday through Sunday?

3. Juan has saved $710 towards a down payment for a car. Juan has found a car to purchase for $3,050. How much more money does Juan need to buy the car?

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**4.1 Proportions** p. 67

Find the missing number in the following proportions.

**\*Multiply diagonally. Divide by remaining number.**

1. $\frac{12}{30} = \frac{2}{c}$ 2. $\frac{14}{18} = \frac{m}{27}$

3. $\frac{30}{t} = \frac{45}{81}$ 4. $\frac{h}{108} = \frac{24}{72}$

**4.1 Ratios and Proportions --- Problem Solving**

5. In an office cabinet, the ratio of pencils to pens is 9 to 10. If there are a total of 117 pencils, find the number of pens in the office cabinet.

6. The ratio of memberships for males to females is 3 to 2 at the fitness center. If there are a total of 474 males that belong to the fitness center, find the number of females that belong.

7. The ratio of neutrons in the nucleus of atom A to atom B is 6 to 7. If there are 63 neutrons in the nucleus of atom B, find the number of neutrons in the nucleus of atom A.

**4.5 Box Method**  p. 75

What is 20% of 350?

20 goes in % top right corner

350 goes in of bottom left corner

100 goes in bottom right corner

 is % ? 20

 of 100 350 100

**Multiply diagonally 350 x 20 = 7000**

**Divide remaining number 7000 ÷ 100 = 70**

**What is 20% of 350?**

**70**

**4.6 Problem Solving**  #1 p. 79

 part %

 whole 100

 total

1. Many financial planners recommend that you save to 15% of your income for retirement starting in your 20s. If you make $28,000.00 per year, how much money will you save for retirement in a year?
2. Bitter Neumann Appliance recently mailed 8,000 sales flyers with possible winning prize numbers to past shoppers in Sheboygan and Manitowoc County. 14.5% of the customers that received the letter came to see if they were prize winners. How many customers attended the sales event?

**4.6 Problem Solving cont.**  p. 80

 part %

 whole 100

 total

1. The Federal Insurance Contributions Act (FICA) is the federal law that requires employers to withhold two separate taxes from the wages employees are paid. FICA is comprised of
	1. 6.2% Social Security tax
	2. 1.45% Medicare tax

Mark’s paycheck for working 80 hours is $1,200.

1. How much money is deducted for Social Security tax?
2. How much money is deducted for Medicare tax?
3. Amanda is making cat toys for the Sheboygan County Humane Society. She has made 20 cat toys already. This is 8% of her goal. How many cat toys is she planning to make?