Approximate Conversions to Metric Measures

Symbol	When You Know	Multiply by	To Find	Symbol
LENGTH				
in	inches	*2.5	centimeters	cm
ft	feet	30	centimeters	cm
yd	yards	0.9	meters	m
mi	miles	1.6	kilometers	km
AREA				
in^2	square inches	6.5	square centimeters	cm^2
ft^2	square feet	0.09	square meters	m^2
yd^2	square yards	0.8	square meters	m^2
mi^2	square miles	2.6	square kilometers	km^2
	acres	0.4	hectares	ha
MASS (weight)				
oz	ounces	28	grams	g
lb	pounds	0.45	kilograms	kg
	short tons (2000 lb)	0.9	tonnes	t
VOLUME				
tsp	teaspoons	5	milliliters	ml
Tbsp	tablespoons	15	milliliters	ml
fl oz	fluid ounces	30	milliliters	ml
c	cups	0.24	liters	l
pt	pints	0.47	liters	l
qt	quarts	0.95	liters	l
gal	gallons	3.8	liters	l
ft^3	cubic feet	0.03	cubic meters	m^3
yd^3	cubic yards	0.76	cubic meters	m^3
TEMPERATURE (exact)				
$^{\circ}F$	Fahrenheit temperature	5/9 (after subtracting 32)	Celsius temperature	$^{\circ}C$
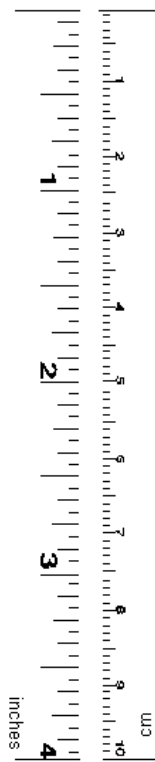
*1 in = 2.54 (exactly). For other exact conversions and more detailed tables, see NBS Misc. Publ. 286, Units of Weights and Measures, Price $2.25, SD Catalog No. C13.10 286

NCCVT	SENIOR MATH UNIT 4: MEASUREMENT

Use the questions below to keep track of key concepts from this lesson's study activity.

1) Practice: Summarizing

In the space below, briefly explain why people need standardized units of measurement.

_____

2) Practice: Organizing Information

Complete the chart by writing the full name for each unit abbreviation below.

Customary (U.S.) Units of Measurement			
Length	**Capacity**	**Weight**	**Time**
—————— (in)	—————— (oz)	—————— (oz)	—————— (sec)
—————— (ft)	—————— (c)	—————— (lb)	—————— (min)
—————— (yd)	—————— (pt)	—————— (T)	—————— (hr)
—————— (mi)	—————— (qt)		—————— (d)
	—————— (gal)		—————— (yr)

3) Practice: Organizing Information

Fill in the blanks to complete the unit equalities.

U.S. Units of Measurement	
Length	**Weight**
1 foot = ——— inches 1 yard = ——— feet 1 mile = ——— feet	1 pound = ——— ounces 1 ton = ——— pounds
Capacity	**Time**
1 cup = ——— ounces 1 pint = ——— cups 1 quart = ——— pints 1 gallon = ——— quarts	1 minute = ——— seconds 1 hour = ——— minutes 1 day = ——— hours 1 year = ——— days

4) Practice: Organizing Information

Fill in the blanks to complete the list.

The Metric System

- It is a system of —————— .
- It is used in every major country except the —————— .
- We call it a —————— system because it is based on powers of 10.
- Each unit is ——— times larger or ——— times smaller than the next size unit.
- Most unit names are a —————— combined with the word *meter*, *liter*, or *gram*.

5) Practice: Organizing Information
Complete the chart by writing the full name for each unit abbreviation below.

Metric Units of Measurement			
Length	**Capacity**	**Weight**	**Time**
—————— (mm)	—————— (mL)	—————— (mg)	The same units of time are used in both the metric and the customary systems of measurement.
—————— (cm)	—————— (L)	—————— (g)	
—————— (m)		—————— (kg)	
—————— (km)			

6) Practice: Organizing Information
Fill in the blanks to complete the unit equalities.

Metric Units of Measurement		
Length	**Capacity**	**Weight**
1 centimeter = ——— millimeters 1 meter = ——— centimeters 1 kilometer = ——— meters	1 liter = ——— milliliters	1 gram = ——— milligrams 1 kilogram = ——— grams

7) Practice: Summarizing
Circle the *best* customary and metric unit for each measurement. Explain your choice.

    1. Measurement: the length of a sheet of notebook paper
       customary: **a.** inch   **b.** mile   *metric:*   **a.** meter   **b.** centimeter
    Explain:

    _____

    2. Measurement: the capacity of a swimming pool
       customary: **a.** gallon   **b.** cup   *metric:*   **a.** milliliter   **b.** liter
    Explain:

    _____

    3. Measurement: the weight of a feather
       customary: **a.** pound   **b.** ounce   *metric:*   **a.** gram   **b.** milligram
    Explain:

    _____

    4. Measurement: the distance between two cities
       customary: **a.** mile   **b.** yard   *metric:*   **a.** meter   **b.** kilometer
    Explain:

    _____

8) Practice: Summarizing
Fill in the blanks to complete the definition.

A ————— ————— is a new measurement unit made by combining two different basic units.

These units are sometimes called ————— .

In the space below, describe two examples of derived units.

        Example 1   **Example 2**

    What is the derived unit? —————   What is the derived unit? —————
   What two basic units are combined? ————   What two basic units are combined? —————

4.1.2 Checkup: Practice Problems   Checkup

Algebra I Literacy Advantage (S1002873)

Name:

_____

Date: _____

Answer the following questions using what you've learned from this lesson. Write your responses in the space provided.

For questions 1 – 5, answer the questions about metric units.

1. Which of the following is a metric unit used to measure the distance between two cities?

Answer Choices:
Kilometers
Miles
Centimeters
Grams

2. Which of the following is a metric unit used to describe the length of your thumb?

Answer Choices:
Feet
Miles
Centimeters
Megameters

3. Which of the following is a metric unit used to measure the mass of a bowling ball?

Answer Choices:
Kilometer
Kilogram
Second
Pound

4. Which metric prefix is largest?

Answer Choices:
Nano
Giga
Mega
Kilo

5. Which metric prefix is smallest?

Answer Choices:
Micro
Milli
Centi
Deci

For questions 6 – 10, answer the questions about the U.S. system of units.

6. You wish to measure the weight of a dog by using a scale that uses the U.S. system of units. Which would most likely be the weight shown on the scale?

Answer Choices:
40 ounces
40 pounds
40 kilograms
40 grams

7. In both the metric and U.S. systems of measurement, what unit of time would you use to show how long it takes you to walk 50 feet?

8. You wish to measure a beetle by using a ruler that uses the U.S. system of units. Which would most likely be the length shown on the ruler?

Answer Choices:
2 inches
2 centimeters
2 yards
2 meters

9. Which is the largest measure of length in the U.S. system of measurement?

Answer Choices:
Feet

10. Which is a measure of weight in the U.S. system of measurement?

Answer Choices:
Yards

Yards
Inches
Miles

Ounces
Grams
Kilograms

4.2.1 Study: Converting Units   Study Sheet

Algebra I Literacy Advantage (S1002873)

Name:

_____

Date: _____

Use the questions below to keep track of key concepts from this lesson's study activity.

1) Practice: Summarizing

In the space below, briefly explain why people need to know how to convert units.

_____

2) Practice: Summarizing

Describe each property in your own words. Then use numbers or variables to show each property.

Identity Property of Multiplication	Division Property of Equality
Describe:	**Describe:**
Show:	**Show:**

3) Practice: Organizing Information

Use numbers to fill in the blanks in this list.

Conversion Ratios

- A conversion ratio is a way to compare _____ equivalent measurements.
- Every conversion ratio is equal to _____.
- For each unit equivalent, you can write _____ conversion ratios.

Example Unit Equivalent: 1 foot = 12 inches	
$\dfrac{1 \text{ foot}}{\_\_\_\_ \text{ inches}}$	$\dfrac{\_\_\_\_ \text{ inches}}{1 \text{ foot}}$

- The unit you want to change should be on the *bottom* of the conversion ratio.

Examples	
Convert 5 feet to inches.	Convert 36 inches to feet.
Use: _____	Use: _____

4) Practice: Organizing Information

Fill in the blanks to complete the steps.

	How to Convert Units	Example Convert 4.5 yards to feet.
Step 1	Identify your units.	1 yard = _____ feet
Step 2	Choose your conversion ratio.	$\dfrac{\_\_\_\_ \text{ feet}}{1 \text{ yard}}$

Step 3:	Multiply. units to change • conversion ratio	$4.5 \text{ yards} \cdot \dfrac{3 \text{ feet}}{1 \text{ yard}} = \dfrac{4.5 \ \cancel{\text{yards}}}{1} \cdot \dfrac{3 \text{ feet}}{1 \ \cancel{\text{yard}}}$ $= \dfrac{4.5 \cdot 3 \text{ feet}}{1}$ $= \underline{\quad} \text{ feet}$ $4.5 \text{ yards} = \underline{\quad} \text{ feet}$

5) Practice: Summarizing

Fill in the blanks to complete the rules.

Shortcuts for Converting Metric Units	
To change a smaller unit to a larger unit, move the decimal point to the _____ .	**To change a larger unit to a smaller unit, move the decimal point to the _____ .**
Convert 482.5 milliliters to liters **Think:** 1 liter = 1000 milliliters 1000 has _____ zeros. **Do:** Move the decimal point _____ places to the _____ . 482.5 milliliters = _____ liters	Convert 3.75 meters to centimeters. **Think:** 1 meter = 100 centimeters 100 has _____ zeros. **Do:** Move the decimal point _____ places to the _____ . 3.75 meters = _____ centimeters

6) Practice: Organizing Information

Fill in the blanks.

Common U.S. - Metric Conversions		
Length	**Weight**	**Length**
1 inch = _____ centimeters	1 kilogram ≈ _____ pounds	1 kilometer ≈ _____ miles

Complete each conversion. Show your work.

1. 64 ounces = _____ pounds.

    Step 1: 1 pound = _____ ounces

    Step 2: $\dfrac{1 \text{ pound}}{\underline{\quad} \text{ ounces}}$

    Step 3: $64 \text{ ounces} \cdot \dfrac{1 \text{ pound}}{\underline{\quad} \text{ ounces}}$

2. 7.2 kilometers = _____ meters

3. 683.75 milligrams = _____ grams

4. 5 gallons = _____ quarts

5. 0.35 liters = _____ milliliters

6. 25 inches = _____ centimeters

7. Challenge: Multiple Steps

15 days = _____ minutes

8. Challenge: Derived Units

20 meters per second = _____ kilometers per hour

Answer the following questions using what you've learned from this lesson. Write your responses in the space provided.

Unit Conversions

1 inch = 2.54 centimeters
12 inches = 1 foot
1000 meters = 1 kilometer
16 ounces = 1 pound
60 seconds = 1 minute
1760 yards = 1 mile
60 minutes = 1 hour

For questions 1 – 4, write the ratio you would use to perform the conversion.

1. 17 inches into centimeters

2. 40 meters into kilometers

3. 29 pounds into ounces

4. 2.3 hours into minutes

For questions 5 – 10, perform the conversion.

5. Convert 2.6 miles into yards.

6. Convert 6.75 yards into inches.

7. Convert 25 centimeters into inches.

8. Convert 113 minutes into hours.

9. Convert 1.55 feet into centimeters.

10. Convert 77 centimeters into feet.

Use the questions below to keep track of key concepts from this lesson's study activity.

1) Practice: Summarizing

Fill in the blanks to complete each definition.

    Estimate: To make a good _____ or a rough calculation _____ to something's value.

        Example: About 28,000 people live in my hometown.

    Scale: The _____ of a number in powers of 10.

        Example: The scale of 28,000 is ten-thousands.

    Order of Magnitude: The _____ in a number expressed as a power of _____.

        Example: Ten-thousands = 10^4 = order of magnitude 4.

2) Practice: Organizing Information

Fill in the blanks to complete the chart.

Number	Scale	Power of 10	Order of Magnitude
7	ones	10^0	0
23			
579			
6485			
34,057			
182,340			
8,401,900			

3) Practice: Making Mental Images

Name a value you think matches each scale.

Amount	Scale
	ones
	tens
	hundreds
	thousands
	millions

4) Practice: Summarizing

Why do we use estimation to answer a Fermi question?

5) Practice: Asking Questions

What two questions should you ask yourself about a Fermi question?

1. _____

2. _____

6) Practice: Organizing Information

Fill in the blanks to complete the following steps and answer this Fermi question.

> **How much water do all the people in the United States use each year to brush their teeth?**

Step 1 Organize Your Information.

What I Know	What I Need to Know
• There are _____ days in 1 year. • Most people brush their teeth once a day.	The population of the United States (I found out it is about 304,000,000) How much _____ is used each time people brush their teeth. (My guess: about 1 cup)

Step 2: Use order of magnitude to identify the scale of your estimate.

1 cup of water	x	1 brushing a day	x	365 days a year	x	304,000,000 people
1	x	1	x	365	x	304,000,000
1	x	1	x	100	x	100,000,000 = 10,000,000,000
10^0	x	_____	x	10^2	x	_____ = _____

Scale of Estimate: _____

Step 3: Use rounding to get a closer estimate.

1 cup of water	x	1 brushing a day	x	365 days a year	x	304,000,000 people
1	x	1	x	365	x	304,000,000
1	x	1	x	400	x	300,000,000 = _____

Estimate: People in the United States use about _____ cups of water each year to brush their teeth.

Answer the following questions using what you've learned from this lesson. Write your responses in the space provided.

For questions 1 – 3, determine whether the quantity is measured in the ones, tens, hundreds, or thousands.

1. The number of times the sun rises in 10 years	2. The money you would have by earning $100 per day for 1 month	3. The number of seconds it takes to yawn

For questions 4 – 7, write the order of magnitude of the number.

4. 2,386,387	5. 7236	6. 42	7. 129,487,187

For questions 8 – 10, write the order of magnitude for each quantity.

8. The number of legs on a chair	9. The weight of a human adult	10. The number of fingers plus the number of toes on a person

4.5.1 Study: Applications of Measurement   Study Sheet
Algebra I Literacy Advantage (S1002873)   Name: _____
                                                                  Date: _____

Use the questions below to keep track of key concepts from this lesson's study activity.
1) Practice: Summarizing
What is an application problem?

_____

_____

2) Practice Organizing Information
Complete the outline by briefly explaining what you should do in each step.

The Four-Step Strategy for Solving Application Problems
I. Understand the Problem

_____

_____

II. Gather Your Resources

_____

_____

III. Come to an Answer

_____

_____

IV. Check Your Answer and Present the Solution

_____

_____

3) Practice: Asking Questions
What are the three most important questions to think about when you start to solve a problem?

    1. _____
    2. _____
    3. _____

4) Practice: Summarizing
What method(s) did you use to solve each of the four application problems in this lesson?

1. The Painting Problem ———————————————————————
2. The Pool Problem ——————————————————————————
3. The Desk Problem ——————————————————————————
4. The Line Problem ——————————————————————————

5) Practice: Asking Questions
Use the following questions to solve this problem.

> You need to cover your garden with topsoil. The garden is a rectangle that is 17 feet long and 21.5 feet wide. Each bag of topsoil will cover 20 square feet. How many bags of topsoil do you need?

What do you know?

- The garden is shaped like a _____.
- It is _____ long and _____ wide.
- Each bag of topsoil covers _____.

What do you want to find out?

_____

Should you find an exact answer or can you estimate? Explain.

_____

What kind of answer do you expect? Explain.

_____

Solve the problem in the space below. Show your work.

How do you know that your answer is correct or reasonable?

_____

Present your final answer in a complete sentence. Use words from the problem.

Answer the following questions using what you've learned from this lesson. Write your responses in the space provided.

Unit Conversions

1 inch = 2.54 centimeters
12 inches = 1 foot
1000 meters = 1 kilometer
16 ounces = 1 pound
60 seconds = 1 minute
1760 yards = 1 mile
60 minutes = 1 hour
128 ounces = 1 gallon

For questions 1 – 6, solve the problems involving unit conversion.

1. Adam has one jug with a volume of 2005 cubic centimeters and another with a volume of 200 cubic inches. How many more cubic centimeters does the bigger jug have compared to the smaller one? Round your answer to the nearest cubic centimeter.

2. Doreen has one jug with a volume of 1575 cubic centimeters and another with a volume of 133 cubic inches. How many more cubic inches does the bigger jug have compared to the smaller one? Round your answer to the nearest cubic inch.

3. David read from 10 p.m. until 2 a.m. How many minutes did he spend reading?

4. Jessie fell asleep at 9 p.m. on Friday night and woke up at 7 a.m. on Saturday morning. How many minutes did she sleep?

5. Patrick walked 3 miles in the same amount of time that Allison walked 6000 yards. How many more miles did the person who walked farther walk? Round your answer to the nearest hundredth of a mile.

6. Felicity ran for 112 minutes and Eddie ran for 1.65 hours. How much more time, in minutes, did the person who ran longer last?

For questions 7 – 10, solve the problems involving comparison of speeds.

7. John rode his bike down the street at 10 miles per hour. Two hours later, Yasmine started at the same place and rode her bike toward him at 15 miles per hour. From the moment Yasmine started on her bike, how long did it take her to catch up to John?

8. Sandra rode her bike down the street at 8 miles per hour. Three hours later, Josh started at the same place and rode his bike toward her at 12 miles per hour. If Sandra started riding at 1 p.m., when did Josh catch up to her?

9. Frank walks at a speed of 3 miles per hour. Aaron walks at a speed of 4 miles per hour. If Frank starts walking 3 hours before Aaron, how long does it take Aaron to catch up to him?

10. Andy starts driving at 30 miles per hour at 10 a.m. Peter follows him at 1 p.m. but drives 60 miles per hour. At what time will Peter catch up to Andy?

4.6.1 Practice: Assignment

Algebra I Literacy Advantage (S1002873)

Points possible: 100

Practice Assignment

Name: _____

Date: _____

Answer the following questions using what you've learned from this unit. Write your responses in the space provided.

Scoring: Each question is worth 5 points.

Unit Conversions

1 inch = 2.54 centimeters
12 inches = 1 foot
1000 meters = 1 kilometer
16 ounces = 1 pound
60 seconds = 1 minute
60 minutes = 1 hour
1 yard = 3 feet

For questions 1 – 2, answer the questions about order of magnitude.

1. A town has 3 high schools with 4,000 students each. What is the order of magnitude of the total number of high school students in the town?

2. 30,000 people attend a basketball game each week. What is the order of magnitude of the number of people who attend 8 weeks of games?

For questions 3 – 8, perform the conversion.

3. 29 ounces into pounds

4. 177 minutes into hours

5. 332 cm into inches

6. 99 yards into feet

7. 1,059 seconds into minutes

8. 3,467 meters into kilometers

For questions 9 – 10, answer the questions about rates.

9. A car travels 1 mile in 75 seconds. At this rate, how many miles will the car travel in 1 hour?

10. Hayden can run 1 mile in 5 minutes and 20 seconds. At this rate, how many miles will she run in 1 hour?

4.6.2 Review: Measurement   Review
Algebra I Literacy Advantage (S1002873)   Name: _____
                                                                             Date: _____

Use your notes from the studies to begin your review. Check the questions and answers from the study sheets you got on the first page of each study.

Also, review the key terms for each lesson. They're found on each lesson overview page. Make sure you know what each key term means before you take the test.

The following checklist will help you figure out if you're ready to take the test. If you check "No" for any question, go back to the lesson and activity where the information appears and review that information.

Question	Example	Yes	No
Lesson 1: Metric and Customary Units			
Do you know what units of measurement are most commonly used in the United States?			
Do you know the customary units of measurement?			
Can you convert between customary units?	How many quarts are in 1 gallon?		
Do you know which customary units are units of capacity?			
Do you know which customary units are units of weight?			
Do you know when to use the appropriate customary unit in a given situation?	Which is the best customary unit for measuring the weight of a cherry?		
Do you know what units of measurement belong to both the U.S. and metric systems?			
Do you know the metric prefixes?			
Do you know when to use the appropriate metric unit in a given situation?	What is the best metric unit for measuring the length of a finger?		
Do you know which metric units are units of weight?			
Do you know which metric units are units of length or distance?			
Do you know what units are appropriate for measuring time in the metric system?			
Do you know what number the metric unit is based on?			
Can you convert between metric units?	How many milligrams are in 1 gram?		
Lesson 2: Converting Units			

Do you know what ratio to multiply by when converting units?	To convert 28 yards to feet, what ratio could you multiply by?		
Can you convert units of measurement?	What is the result of converting 2340 minutes to hours?		
Do you know how to convert units of measurement when there are multiple steps?	Jane studied for 9304 seconds. How many hours did she study for?		
Lesson 3: Estimation and Scale			
Do you know how to find the scale of a value?	What is the scale of the answer in the following question? *How many days are in a year?*		
Given situations, can you rank values from largest to smallest?	Number of people living in a typical home. Number of fish in the ocean. Number of words in a magazine. Number of typical hours a person sleeps in a week.		
Can you find the order of magnitude of a number?	42,080,175		
Can you estimate values in a given situation?	Estimate the price of a cup of coffee in dollars.		
Lesson 5: Applications of Measurement			
Can you determine which conversion ratio to use to solve an application problem?	Don started work at 9:30 a.m. and finished at 6:00 p.m. To figure out how many minutes he worked what conversion ratio would you use?		
Can you solve an application problem that involves converting units of measurement?	Don started work at 9:30 a.m. and finished at 6:00 p.m. How many minutes was he working for?		
Can you solve an application problem that involves finding the order or magnitude?	Don started work at 9:30 a.m. and finished at 6:00 p.m. What is the order of magnitude for the number of seconds that he was driving for?		
Can you solve an application problem that involves determining the scale of a number?	Two people are riding their bikes down a road. The first bike is going 25 mph and the second bike is going 40 mph. On what scale is the speed of each bike measured?		
Can you solve an application problem that involves determining the number of significant figures in a number?	Sara drove her car 204 miles. The car used 7.03 gallons of gasoline. How many significant figures are in the number of gallons of gasoline that the car used?		
Can you solve an application problem that involves estimation?	Sara drove her car 204 miles. The car used 7.03 gallons of gasoline. Estimate the car's gasoline mileage in miles per gallon.		

Do you know how to solve a Fermi problem?	The number of miles between New York to Philadelphia is about 98 miles. Each of Tom's steps is about 2 feet long. Estimate the number of steps Tom would take if he walked from Philadelphia to New York.		

1.2.1 Study: Absolute Value

Math Foundations II (S1001159)

Name: _____

Date: _____

The questions below will help you keep track of key concepts from this lesson's study activity. Use the study page numbers listed to help you fill in the blanks or solve the problems.

Page 1

Every number has two qualities: a ——— and a ————————————— .

The *absolute value* of a number is its ————————— from ——— .

Plot each of these numbers on the number line here and write each number's absolute value: -3, -2, 4, 6.

The absolute value of -3 is ———

The absolute value of -2 is ———

The absolute value of 4 is ———

The absolute value of 6 is ———

Page 3

The absolute value of a positive number is ————————————— .

The absolute value of a negative number is ————————————— .

Find each absolute value:

$|29| =$ ———

$|7| =$ ———

$|5| =$ ———

$|-9| =$ ———

$|-16| =$ ———

$|-32| =$ ———

$|-12| =$ ———

$|14| =$ ———

$|8| =$ ———

$|53| =$ ———

|112| = —————

|-93| = —————

List two numbers that each have an absolute value of 3: ————— , —————
List two numbers that each have an absolute value of 10: ————— , —————
List two numbers that each have an absolute value of 142: ————— , —————
Page 4

Evaluate each expression.

|3 · (2 + 1)| = —————

|1 - 3| = —————

|5 - 3 - 4| = —————

|4 · (-1 + 2)| = —————

|8 + 5| = —————

|3 + 2 - 6| = —————

|-5 + 6| = —————

|-3 - 4| = —————

Page 5

Evaluate each expression.

|-8| = —————

|32| = —————

2 + |-9| = —————

2 · |6 + 2| = —————

1.2.2 Checkup: Practice Problems
Math Foundations II (S1001159)   Name: _____
                                                                 Date: _____

Answer the following questions using what you've learned from this lesson. Write your responses in the space provided.
For questions 1 – 10, evaluate the expression.

  1. $\left|-14\right|$ **2.** $\left|7\right|$ **3.** $\left|0\right|$

  4. $7+\left|-4\right|$ **5.** $13+\left|6\right|$ **6.** $1+\left|-7\right|$ **7.** $6+\left|-9\right|$

8. $5 + |6 - 4|$ **9.** $3 + |5 - 6|$ **10.** $7 + |1 + 3|$

1.6.1 Study: Order of Operations
Math Foundations II (S1001159) Name: _____

Date: _____

Page 2

A _____ _____ is a collection of numbers and operations arranged in a meaningful order.

Page 7

To evaluate an expression that has grouping symbols inside other grouping symbols, you should do the operations inside the _____ grouping symbols first.

Complete the rule for the order of operations:

Do the operations inside the _____.

Do all _____ and _____ in order from _____ to _____.

Do all _____ and _____ in order from _____ to _____.

Page 8

Circle which operation should be performed first in each of these expressions:

$10 \div 2 + 6 - 3$

$9 \cdot 2 \div 3 + 1$

$12 \div 4 - 2 \cdot 1$

$7 + 1 - 3 \cdot 2$

Page 9

Evaluate the expression step-by-step:

$3 + 2 \cdot 7 - 5 \div 1 + 3 - 2$

Page 9

Evaluate the expression step-by-step:

$$4 + \left[6 \div (5 - 2) + 3 - 1\right] \cdot 4$$

Name: _____

Date: _____

Answer the following questions using what you've learned from this lesson. Write your responses in the space provided.

For questions 1 – 10, evaluate the expressions.

1. $6 + 4 \bullet 2 - 40 \div 8 + 3 - 2$

2. $4 + 9 \div 3 + 2 \bullet 6 - 12 + 1$

3. $14 - 3 \bullet 2 + 25 \div 5 + 5 - 3$

4. $12 - 14 \div 2 - 1 \bullet 2 - 1$

5. $1 + 15 \bullet 4 - 70 \div 2 + 14 - 13$

6. $2 \bullet 3 - 2 + 6 \div 2 + 1 - 2$

7. $6 + 2 \bullet (9 - 5) \div (5 - 3) - 4$

8. $9 + 16 \div (6 - 4) \bullet (15 - 11) - 2$

9. $26 - \left[3 \bullet (10 - 6) \div (9 - 7)\right] \bullet 3$

10. $4 + \left[22 \div (6 + 5) + 14 - 8\right] \bullet 4$