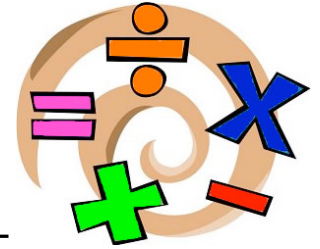


South Central Interior Distance Education School

There are 42 pages in this document. The Activation Send-In assignment follows the Resource Pages. You do NOT need to print the entire package. Print only the pages from the Activation Assignment you need to send in (cover page and pages you write on). If able you may scan and send in as a multi-page PDF file or set of JPG files with page numbers.



ADULT FOUNDATIONS MATH ... Activation Assignment Resource Pages

This package for Adult (LF Math Level 5) Mathematics Skills will help you complete the Activation Send-In Assignment 1.0.

(As you work through the Lessons in this Section, keep track of the time spent. You will be asked to record the total time at the end of the Send-In Activities.)

WHAT IS MATHEMATICS USED FOR?

Have you ever thought about the many uses of mathematics? The practical uses of mathematics are almost without end. Here are but a few of its many uses.

- measuring distances, areas, and volumes
- predicting future events (Astronomers can predict accurately when an eclipse of the sun or moon may occur.)
- navigating ships and airplanes
- building homes and bridges
- drawing maps
- understanding the motions of the planets
- inventing new machines
- building electronic brains
- inventing new medicines
- using atomic energy
- forecasting the weather
- navigating space ships

More uses for mathematics are being found every day.

In this Lesson, we have provided you with practice in addition, subtraction, multiplication, and division of whole numbers.

Review of Operations with Whole Numbers

You have been working with whole numbers since Grade 1 and probably feel that you are quite good at it. However, we can all learn to be faster and more accurate. The following hints will help you.

1. Write the numbers neatly and in straight columns. If your columns have a habit of sliding off to one side, write your numbers from right to left (that is, backwards). This will keep your columns straight.
2. In addition questions, be on the lookout for pairs of numbers that come together and add up to 10. Do not waste time looking for these pairs. Pick them up as you go. Here is an example.

8 We see that 8 and 2 make 10 and we treat this as one number. Start
2 from the bottom. Instead of saying 7, 9, 17, we say 7, 17. Because we see
+ 7 that the $8+2 = 10$.

If you want to improve your speed in adding, you must know by heart all the possible sums of two single digit numbers.

Review of Multiplication Tables

In this Section you will be doing quite a bit of work with multiplying whole numbers. Do you find this work hard or easy? If you find it hard, the problem likely is that you do not know your multiplication tables as you should. You should know the multiplication tables at least up to 12×12 . Go over the table on the next page until you can call off all products with speed and accuracy. jump around the table haphazardly until all products are automatic.

The time you spend on this review will certainly pay dividends in doing later work in this course.

When you are sure you know the table, do Send-In Activity 1 A. In the Activation Assignment.

Multiplication Table

<u>1 times</u>	<u>2 times.....</u>	<u>3 times</u>	<u>4 times</u>	<u>5 times</u>
1x1=1	2x1=2	3x1=3	4x1=4	5x1=5
1x 2= 2	2x 2= 4	3x2=6	4 x 2 = 8	5x2=10
1x 3 = 3	2x3 =6	3 x3 = 9	4 x3 =12	5 x3= 15
1x 4 = 4	2x4 = 8	3x4=12	4 x4 =16	5 x4= 20
1x 5= 5	2x5=10	3x5=15	4 x5 = 20	5x5=25
1x6 =6	2x6=12	3x6=18	4 x6 = 24	5x6=30
1x7 = 7	2x7=14	3x7=21	4 x7 = 28	5x 7= 35
1x 8 = 8	2x8=16	3x8=24	4x8 =32	5x8=40
1x9=9	2x9 =18	3x9=27	4 x9 = 36	5x 9 = 45
1x10 =10	2x10=20	3x10=30	4 x10= 40	5x10= 50
1x11=11	2x11=22	3x11=33	4x11=44	5x11=55
1x12=12	2x12=24	3 x12= 36	4x12 = 48	5x12=60
<u>6 times</u>	<u>7 times</u>	<u>8 times</u>	<u>9 times</u>	<u>10 times</u>
6x1=6	7x1=7	8x1=8	9x1=9	10x1=10
6x2=12	7x2=14	8x2 =16	9x2=18	10x2= 20
6x3=18	7x3=21	8x3=24	9x3 = 27	10x3= 30
6 x4= 24	7x 4= 28	8x4=32	9x4 =36	10x4=40
6x5=30	7x5=35	8x5=40	9x5=45	10x5=50
6 x6= 36	7x6=42	8x6=48	9x6=54	10x6 =60
6x7=42	7x7=49	8x7=56	9x7=63	10x7 = 70
6x8=48	7x8=56	8x8=64	9x8 =72	10x8=80
6 x9= 54	7x9 =63	8x9=72	9x9=81	10x9=90
6x10=60	7x10=70	8x10=80	9x10=90	10 x10 =100
6 x11= 66	7x11=77	8x11=88	9x11=99	10x11= 110
6 x12= 72	7x12=84	8x12=96	9x12=108	10x12=120
<u>11 times</u>	<u>12 times</u>	<u>13 times</u>	<u>14 times</u>	<u>15 times</u>
11x1=11	12x1=12	13x1=13	14x1=14	15x1=15
11x2=22	12x2=24	13x2=26	14x 2= 28	15x2=30
11x3=33	12x3=36	13 x3= 39	14x3=42	15x3=45
11x4=44	12x4=48	13x4=52	14 x4 =56	15x4 =60
11x5=55	12x5 =60	13x5=65	14x5=70	15x5=75
11x6=66	12x6=72	13 x6 = 78	14x6=84	15x6 =90
11x7=77	12x7 =84	13x7=91	14x7=98	15 x7 =105
11x8=88	12x8=96	13x8=104	14x8=112	15x8=120
11x9=99	12x9=108	13x9=117	14x9=126	15 x9 =135
11x10 =110	12x10 =120	13x10 =130	14 x10 =140	15x10 =150
11x11=121	12x11=132	13 x11= 143	14x11=154	15x11=165
11x12=132	12x12=144	13x12=156	14x12=168	15x12=180

STUDY HINTS

From time to time we shall give you hints that will help you to do your work faster and better. Here briefly are the steps to follow in studying each Lesson.

1. Note the time when you start. (Write it down.)
2. Study the entire Lesson very carefully (about 25 to 35 minutes).
3. Go back and review quickly what you have learned (about 5 minutes).
4. Do the Self-Marking Activities for the Lesson (about 20 minutes).
5. Correct your Self-Marking Activities (about 5 minutes).
6. Note the time when you finish.

Divisibility Rules

As you learned in Lesson A, you should look for ways that simplify your work in mathematics. For example, simple divisibility tests you learned years ago will help you find if a number can be divided into evenly.

Let's review these important divisibility rules.

DIVISIBLE BY	RULE	NUMBER TO BE DIVIDED IS20 403
$\div 2$	the number must be even	not divisible by 2 (last number is odd)
$\div 3$	the sum of the digits can be divided evenly by 3	divisible by 3 (since $2 + 0 + 4 + 0 + 3 = 9 \div 3$)
$\div 4$	the last 2 digits can be divided evenly by 4	not divisible by 4 (since 03 cannot be divided by 4)
$\div 5$	number ends in a 5 or 0	not divisible by 5 (last digit not 0 or 5)
$\div 6$	number is even and sum of digits are divisible by 3	not divisible by 6 (although sum of digits can be divided by 3, it is not even)
$\div 8$	the last 3 digits can be divided evenly by 8	not divisible by 8 (since 403 cannot be divided by 8)
$\div 9$	the sum of the digits can be divided evenly by 9	divisible by 9 (since $2 + 0 + 4 + 0 + 3 = 9 \div 9$)
$\div 10$	number ends in a 0	not divisible by 10 (number does not end in a 0)

You will find that these rules will save you a lot of time when working with prime and composite numbers, as well as when you study factoring in Section 3. You will find the answers on the next page.

Self Test

1. Which numbers listed below are divisible by 3?

3240 3538 4617 9486 5752

2. Which numbers below are divisible by 4?

1224 3118 4664 26 872 15 196

Answers:

1. 3240, 4617, 9486 are divisible by 3.
2. 1224, 4664, 26 872 and 15 196 are divisible by 4.

How did you do? If you had any trouble, review the rule listed in the chart in this Lesson.

Now turn to Send_In Activity 1 B in your Activation Activity.

Don't forget to time yourself on it

MORE STUDY HINTS

Here are a few more hints which will help you to learn your work more thoroughly.

1. Have a proper place in which to study. If possible have a desk or table of your own. Be sure it is in a well-lighted position. It is best not to be seated so that you can look out of the window, because you may become too interested in what is going on outside.
2. To study well you need quiet. It is not possible to concentrate on your work if the radio or TV is going or if people are chattering.
3. Have all your pencils, pens, erasers, paper, etc., ready before you start to study. Do not waste time by having to jump up in the middle of a Lesson to find a pencil.
4. Get down to work right away and stay on the job. Do not keep getting up for a glass of water or to see what is going on next door.

Place Value

Each digit of a number has a certain place value. The position of a digit in a number tells which place the digit is in. In everyday practice we use **place value** when we write symbols for whole numbers. Counting from right to left, we call the first place the **ones** place, the second place the **tens** place, the third place the **hundreds** place, and so on.

For the number 987 654 321 we have

9	8	7	6	5	4	3	2	1
Hundred millions	Ten millions	millions	Hundred thousands	Ten thousands	Thousands	Hundreds	Tens	Units or Ones

Therefore, in the example above, the digit 8 has a place value of ten millions. The digit 4 has a place value of thousands, and so on. Because the value of a digit depends on its place in the numeral, we say that our number system uses PLACE VALUE.

Face Value

Each digit of a number has a certain face value. The actual digit used (0, 1, 2, 3, 4, 5, 6, 7, 8, 9) tells how many ones, tens, hundreds, thousands, and so on there are. This is called the face value.

Using the same example as place value:

- the digit 5 tells you that there are five ten thousands.
- the digit 3 tells you that there are three hundreds.

Expanded Form

Numbers can be written in different forms. For example:

6 731 written in expanded form

$$=6 \times 1000 + 7 \times 100 + 3 \times 10 + 1$$

Self Test

Write the number 78 451 in expanded form:

Answer: $7 \times 10\,000 + 8 \times 1000 + 4 \times 100 + 5 \times 10 + 1$

Symbols Used in Mathematics

The chart below shows some of the symbols used in Mathematics.

SYMBOL	MEANING OF SYMBOL	EXAMPLE
=	is equal to	$2 + 3 = 5$ Two plus three is equal to five.
>	is greater than	$3 > 2$ Three is greater than two.
<	is less than	$5 < 7$ Five is less than seven.
\neq	is not equal to	$2 \neq 5$ Two is not equal to five.

The symbols $>$ and $<$ are called **inequality symbols**. The larger numeral is placed at the open end (the *wider* or *larger* or *greater* end) of the symbol. If you remember this, you should have no trouble deciding which symbol to use. For example, we can write

$4 > 2$ (four is greater than two) or $2 < 4$ (two is less than four). **Self Test**

Read each of the following and write the meaning in the space provided:

1. $17 < 23$ _____

2. $17 \neq 23$ _____

3. $17 = 10 + 7$ _____

4. $8 > 7$ _____

(no peeking!)

Answers on next page

Answers:

1. Seventeen is less than twenty-three.
2. Seventeen is not equal to twenty-three.
3. Seventeen is equal to ten plus seven.
4. Eight is greater than seven.

Now do the following Self-Marking Activity 1

	Self-Marking Activity 1 C 1. Give the missing words. (6 marks)
--	--

a. 394	The 9 in the _____ place means 9 x _____	
b. 467	The 4 in the _____ place means 4 x _____	

c. 653 297 The 5 in the _____ place
place means 5 x _____

2. Write the **usual** numeral for each of the following. +5 _____

3. Write a numeral that has 328 thousands, 496 millions, and 507.

4. Find the answer.

a. $436 = (4 \times n) + (3 \times 10) + 6$ The n would equal _____

b. $n = (7 \times 100) + (3 \times 10) + 2$ The value of n = _____

c. $(10 \times 10 \times 10) \times 10 = n$ n = _____

d. $5648 = (5 \times 1000) + (x \times 100) + (4 \times 10) + 8$

5. (a) When we write $8327 < 9327$, we mean that 8327 is _____ 9327.

(b) When we write $123 > 93$, we mean that 123 is _____ 93.

6. Give the correct sign ($<$, $>$, or $=$) for each of the following:

a. 36 _____ 26

b. 326 _____ 356

c. 324 _____ $300 + 20 + 4$

d. 143 _____ $130 + 13$

e. 29 _____ 31

f. 653 _____ 597

Total _____ marks out of a possible 23

Correct your answers by checking the answers on the next page.

Answer Key

1.
 - a. tens; 10
 - b. hundreds; 100
 - c. ten thousands; 10 000
2.
 - a. 357
 - b. 6 209
 - c. 4 825
 - d. 5 024
3. 496 328 507
4.
 - a. 100
 - b. 732
 - c. 10 000
 - d. 6
5.
 - a. less than
 - b. greater than
6.
 - a. $>$
 - b. $<$
 - c. $=$
 - d. $<$
 - e. $<$

READING AND WRITING NUMBERS

In reading and writing

numbers, watch these points:

1. Do not say *and*. Do not read 605 as *six hundred and five*. Just say *six hundred five*.
2. Use your knowledge of place value. Thus in 605 you know that the 6 is in the hundreds place and so it means *six hundred*. In 62 437 the 6 is in the ten-thousands place and so means *sixty thousand*
3. Put a hyphen between two numbers less than 100. Thus:
Fifty-two, seventy-one, twenty-seven.

1. Watch your spelling. Some words are tricky.

eight (*e* before *i*)

fourteen (with a u, same as *four*)

forty (no u)

fifteen

fifty (*fif* in both)

nineteen

nine (both contain the word *nine* with an *e*)

hundred (don't say *hunderd*, say *hundred*)

Write out each of the following numbers without looking at the above spelling:

8 14 40 15 50 19 90 100

If you make a mistake, write out that word correctly five times.

Self Test

Write these numbers in words. Check your spelling carefully.

1. 214

2. 358

Answers:

1. two hundred fourteen
2. three hundred fifty-eight

Reading Larger Numbers

To read a large number, we follow these steps:

1. Start at the RIGHT and mark off groups of three digits with a space (unless this has already been done).

475 220 094 302 617

1. Each group of three digits has a name. The names are given in the example below. Learn them and learn how to spell each.

Trillion	billion	million	thousand	one
475	220	094	302	617

2. Determine the name of each group in your number by starting at the RIGHT and naming them _____, *thousand*, *million*, *billion*, etc.
3. Starting at the LEFT, read each group of digits and its name. In the number below,

475 220 094 302 617

we first read:

475—*four hundred seventyfive* and add its name *trillion* Then we read:

220—*two hundred twenty* and add its name *billion* and so on.

The full number is read:

four hundred seventy-five trillion, two hundred twenty billion, ninety-four million, three hundred two thousand, six hundred seventeen

When writing long numbers, as in this example, use commas in the written number after *billions*, *millions*, and *thousands*. However, the commas may be omitted when writing numbers that require only a few words, as in *two million eight*.

We do not often have to write out a long number in words. However, we

frequently have to read it. Since your instructor cannot hear you read a number aloud, he must ask you to write it.

Self Test

1. In the number 7 300 021 009 818
 - a. the seven means _____
 - b. the 300 _____
 - c. the 021 means _____
2. Write in words: 6 305 419

Answers:

1. (a) trillion
 - b. three hundred billion
 - c. twenty-one million

2. Six million, three hundred five thousand, four hundred nineteen

The names of the groups of digits in a larger number are given below.

Sextillion	quintillion	quadrillion	trillion	billion	million	thousand	one
476	587	319	608	742	871	023	964

You need not memorize the names of the groups larger than billions. You may, however, find it interesting to write down and read some very large numbers, such as the one just given.

Approximation—Rounding of Numbers

In the 1971 census the population of Canada was given as 21 568 310. For many purposes, information need not be this accurate, and we often use a number that is close or **approximately equal** to the exact population. We say that the population is:

	21	568	310	
or	21	568	310	(rounded to the nearest ten)
Or	21	568	300	(rounded to the nearest hundred)
or	21	568	000	(rounded to the nearest thousand)
or	21	570	000	(rounded to the nearest ten thousand)
Or	21	600	000	(rounded to the nearest hundred thousand)
or	22	000	000	(rounded to the nearest million)

The rounded number is larger than the original number if the digit that is dropped is greater than 5. Similarly, the rounded number is smaller than the original number if the digit that is dropped is less than 5. As an example, 17 is rounded to 20 while 13 is rounded to 10. When the digit to be dropped is a 5, there is no general agreement as to whether the number should be made larger (rounded up) or made smaller (rounded down). It would be best if everyone rounded numbers the same way, but, as you know, people do not always agree. For convenience, in this math course, let us agree to round numbers up; that is, 15 will be rounded to 20.

Now do Self-Marking Activity 1 D.

Self-Marking Activity 1 D

1. Write in figures:

- a. two hundred twenty-two thousand, two hundred twenty-two

- a. six hundred four thousand, forty

2. Write in words:

a.	825
a.	619
a.	43
a.	2007
a.	6203594611

3. Write a number that is one-half as much as 1 billion.

4. Write a number that is one thousand more than 1 billion.

5. The following table shows the total area of each of the Canadian provinces.

Province	Area in Square Kilometres
Newfoundland (including Labrador)	370 486
Prince Edward Island	5 656
Nova Scotia	52 841
New Brunswick	72 092
Quebec	1 356 798
Ontario	891 199
Manitoba	548 497
Saskatchewan	570 272
Alberta	644 393
British Columbia	930 534

Fill in the following table. Give the areas rounded to the nearest hundred square kilometres (10 marks), and to the nearest thousand square kilometres (10 marks).

Province	Area (km²)(to nearest hundred)	Area (km²)(to nearest thousand)
Newfoundland (including Labrador)		
Prince Edward Island		
Nova Scotia		
New Brunswick		
Quebec		
Ontario		
Manitoba		
Saskatchewan		
Alberta		
British Columbia		

Total _____ marks out of a possible 29

	Correct your answers by using the answer on the next page
--	---

1.
 - a. 222 222
 - b. 604 040

2.
 - a. eight hundred twenty-five
 - b. six hundred nineteen
 - c. forty-three
 - d. two thousand seven
 - e. six billion, two hundred three million, five hundred ninety-four thousand, six hundred eleven

3. 500 000 000
4. 1 000 001 000
5. See chart below

Province	Area (km²)(to nearest hundred)	Area (km²)(to nearest thousand)
Newfoundland (including Labrador)	370 500	370 000
Prince Edward Island	5 700	6 000
Nova Scotia	52 800	53 000
New Brunswick	72 100	72 000
Quebec	1 356 800	1 356 000
Ontario	891 200	891 000
Manitoba	548 500	548 000
Saskatchewan	570 300	570 000
Alberta	644 400	644 000
British Columbia	930 500	931 000

MORE STUDY HINTS

Review the study hints given in Lesson C. Are you following them? If not, start NOW. The sooner they become a habit the easier your work will be. Here are some more hints that you should follow in all your work in mathematics.

1. Keep a supply of scratch paper on hand and use it constantly. Any old pieces of paper, backs of old envelopes, and blank pages in old exercise books will do. Whenever something puzzles you, write it down and work it out yourself. You will find that this will help you greatly to understand the work.
2. Try to do all examples yourself without looking at the solution. Use your scratch paper. Do as much as you can. If you get stuck, look at the given solution until you can get started again. Then continue yourself. If your work is wrong, study the correct way. Then do the example yourself without looking at the given solution. It is not enough just to read over an example. You must always work it out. Only by working it out yourself can you really learn how to do it.

Order of Operations

Look at this expression: $5 + 3 \times 2 = ?$

What is the answer to it? If we add 5 and 3 first, we get $8 \times 2 = 16$. If we multiply 3 and 2 first, we get $5 + 6 = 11$. If there is a choice, then there are two answers to the question. This would create a lot of confusion! As a result, there is a set of rules to guide us when we meet this type of question.

Here they are:

Rule 1: Do all work inside the brackets first.

Examples:

a.
$$3 + (8 \times 2) = ?$$
$$= 3 + 16$$
$$= 19$$

b. $5 \times (9 + 2) = ?$
 $= 5 \times (11)$
 $= 55$

Rule 2: If there are no brackets, do all multiplication and division first, in order from left to right.

Sometimes when you have many operations, it is best to section off the multiplying and dividing as shown below.

Examples:

a. $3 + 7 \times 8 = ?$
 $= 3 + 7 \times 8$
 $= 3 + 56$
 $= 59$

a. $3 \times 5 + 8 \div 2 = ?$
 $= (3 \times 5) + (8 \div 2)$
 $= 15 + 4$
 $= 19$

Rule 3: Finally, do all additions and subtractions in order from left to right.

Example:

$$3 + (8 \times 2) + 4$$
$$= 3 + 16 + 4 = 23$$

Self Test

Read over the rules one more time, then find the following (show your work):

1. $3 + 4 \times 8 = ?$

2. $13 - 8 + 5 \times 2 = ?$

3. $3 + (2 \times 4) - 5 = ?$

Do things in brackets first. Then multiply and divide then add and/or subtract.

4. $4 \times 5 - (6 + 9) \div 3 = ?$

Answers:

1.

$$\begin{aligned} &= 3 + (4 \times 8) \\ &= 3 + 32 \\ &= 35 \end{aligned}$$

2.

$$\begin{aligned} &= 13 - 8 + (5 \times 2) = 13 - \\ &\quad 8 + 10 \\ &= 15 \end{aligned}$$

3.

$$\begin{aligned} &= 3 + (2 \times 4) - 5 \\ &= 3 + 8 - 5 \\ &= 6 \end{aligned}$$

4.

$$\begin{aligned} &= (4 \times 5) - (6 + 9) \pm 3 = \\ &(4 \times 5) - (15 - 3) = 20 \\ &\quad - 5 \\ &= 15 \end{aligned}$$

Now review all the rules and all the examples for each rule in this Lesson.

Now do the following Self-Marking Activity.

Self-Marking Activity

1. Calculate. Watch the order of operation. Show at least two lines of work.

(a) $6 \times 4 - 2$

(b) $8 - 2 \times 3$

(c) $8 \times 3 + 6$

(d) $(9 + 1) + 5$

(e) $24 + (3 + 5)$

(f) $14 - 4 + 2$

(g) $4 \times (5 + 1)$

(h) $(10 + 4 \times 2 - 1) \times 0$

(i) $\frac{10 + 15}{5}$

(j) $\frac{14 + 24 + 6}{3 \times 3}$

2. For each of the following, place one of the following math operations in the space provided to make the statement true.

+, −, X, or ÷

a. $(8 \text{ ______ } 2) \times 5 = 20$

b. $9 + 3 \text{ ______ } 4 = 21$

c. $10 \text{ ______ } 6 \div 3 = 12$

d. $15 \text{ ______ } 5 + 7 = 10$

e. $(10 + 9) \text{ ______ } 0 = 0$

f. $42 \div (3 \text{ ______ } 4) = 6$

3. Calculate using your order of operations. Work must be shown. (2 marks each)

a. $18 + 6 \div 3 - 3 + 2 \times 5$

b. $[15 \times 2 + (9 \div 3)] + 3 \times 20$

Total _____ marks out of a possible 20

$$1. \quad (a) \begin{aligned} 6 \times 4 - 2 \\ = 24 - 2 \\ = 22 \end{aligned} \quad (b) \begin{aligned} 8 - 2 \times 3 \\ = 8 - 6 \\ = 2 \end{aligned} \quad (c) \begin{aligned} 8 \times 3 + 6 \\ = 24 \div 6 \\ = 4 \end{aligned}$$

$$(d) \begin{aligned} (9+1) \div 5 \\ = 10 \div 5 \\ = 2 \end{aligned} \quad (e) \begin{aligned} 24 \div (3+5) \\ = 24 \div 8 \\ = 3 \end{aligned} \quad (f) \begin{aligned} 14 - 4 + 2 \\ = 10 + 2 \\ = 12 \end{aligned}$$

$$(g) \begin{aligned} 4 \times (5+1) \\ = 4 \times 6 \\ = 24 \end{aligned} \quad (h) \begin{aligned} (10+4 \times 2-1) \times 0 \\ = (10+8-1) \times 0 \\ = 0 \end{aligned}$$

$$(i) \frac{10+15}{5} = \frac{25}{5} = 5 \quad (j) \frac{14+(24 \div 6)}{3 \times 3} = \frac{14+4}{9} = \frac{18}{9} = 2$$

2.

a. $(8 \div 2) \times 5 = 20$

b. $9 + 3 \times 4 = 21$

c. $10 + 6 \div 3 = 12$

$$d. 15 \div 5 + 7 = 10$$

$$e. (10 + 9) \times 0 = 0$$

$$f. 42 \div (3 + 4) = 6$$

3.

$$a. 18 + 6 \div 3 - 3 + 2 \times 5$$

$$18 + 2 - 3 + 10$$

$$20 - 3 + 10$$

$$17 + 10$$

$$= 27$$

$$b. [15 \times 2 + (9 \div 3)] + 3 \times 20$$

$$[(15 \times 2) + 3] + 3 \times 20$$

$$[30 + 3] + (3 \times 20)$$

$$33 + 60$$

$$= 93$$

Some Last Words

1. Some good study habits were explained in earlier in these resource pages which you will see again when your first module arrives. Go back and review them. Are you remembering to follow them? Do so.
2. One of the emphases in this package is on place value. The value of a digit depends on its place in the numeral.
3. Approximation and rounding-off were reviewed. The rounded number is larger than the original number if the digit that is dropped is greater than 5.
4. The rules for order of operations were reviewed (BEDMAS). This is a popularly used acronym to remember which order we do math operations. You have not yet encountered exponents in this course but you will soon. Don't panic. An example of an exponent is 3^2

The 3 is the base and the 2 is the exponent. It means that 3 is multiplied by itself twice so, $3^2 = 3 \times 3 = 9$

Brackets – **E**xponents – **D**ivide – **M**ultiply – **A**dd - **S**ubtract:

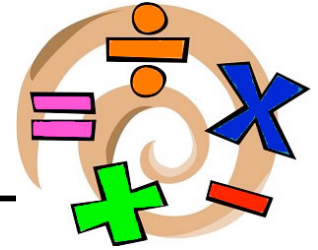
- a. Brackets
- b. Multiplication/Division (working from left to right)
- c. Addition/Subtraction (working from left to right)

Good Luck! Relax and do you best.

South Central Interior Distance Education School

Student Name _____ Date Submitted _____

ADULT FOUNDATIONS MATH . . . Section 1.0 Send-In Assignment



Complete this Send-in as part of your course enrollment. Please read the *Adult Foundations Math Resource* document first and do all guided practice activities before you complete this Send-in assignment.

This will be your first mark entered for the course. When this assignment has been received by SCIDES, your course materials will be sent to you.

This send-in consists of:

- ADULT FOUNDATIONS Math Course Planner _____ / 5 marks
- Section 1 - Assignment 1.0 Activation Assignment _____ / 38 marks
- Activation Assignment Resource Pages

TOTAL: _____ / 43 marks _____ / %

Mail or FAX or Scan and attach to email:

- 1) This **Cover Sheet**
- 2) **Return Address** - Fill out with your complete name and address.
- 3) **Send-In Assignments** - Complete Course Planner and Section 1.0 - they must be completed and returned within two (2) weeks.

Be sure to put proper postage on the envelope (if necessary) and add your return address

[This page intentionally left blank.]

Name: _____

____ / 5 marks

ADULT (ALFM) MATHEMATICS SKILLS Course Planner

Complete all the following contact information that applies to you and check the one that is the best way to contact you during the day:

Home Phone: _____ Work Phone: _____ Cell: _____

Email: _____

other way to contact you (explain) _____

When is the best time for your teacher or tutor/marker to contact you? ____: ____ AM PM

Check your Grade: Grade 10 Grade 11 Grade 12 Graduated

Timetable Options/Course Plan

One of the keys to being successful in anything that you do is to take the time to plan carefully. The objective of this section is to help you create a timetable for managing your schoolwork and enable you to set goals for finishing all of your courses by your desired completion date. **Most full-time students complete 3 to 5 assignments each week.**

The flexibility of our distributed learning program offers you many choices but a plan for completion is essential to success. Most full-time students complete 8 courses in a school year (10 months). The most common timetables are “semestered” (4 courses at a time) or “linear” (8 courses at a time).

What is your planned schedule? Semester System (22 weeks) Linear System (44 weeks)

other: *(explain)* _____

What is your intended **start** date for this course? Now Other date: _____

What is your intended **completion** date for this course? _____ (month) _____ (year)

How many courses are you taking with us this year? _____ How many with other schools/programs? _____

Adult (ALFM) Mathematics Skills consists of 18 more send-in assignments and 3 module tests. How many assignments/tests per week must you do to complete this course as planned? _____ assignments or tests per week.



- *Mark target submission dates on a calendar.*
- *Add this same information from other courses to help you create a schedule for completion.*
- *Record the actual dates you submit work so you can track your progress.*

Delivery Method

Adult (ALFM) Mathematics Skills is offered as a print course only at this time. You will receive workbooks in print form. Submit this assignment by regular mail or send by FAX or scan and attach to an email and send to registrar@scides.ca

If you have access to the Internet, you will find some great online resources to support your learning by searching for key words in the assignments.

Anything else?

Review of Operations with Whole Numbers

You have been working with whole numbers *since* Grade 1 and probably feel that you are quite good at it. However, we can all learn to be faster and more accurate. The following hints will help you.

1. Write the numbers neatly and in straight columns. If your columns have a habit of sliding off to one side, write your numbers from right to left (that is, backwards). This will keep your columns straight.
2. In addition questions, be on the lookout for pairs of numbers that come together and add up to 10. Do not waste time looking for these pairs. Pick them up as you go. Here is an example.

8	We see that 8 and 2 make 10 and
2	we treat this as one number. Start
7	from the bottom. Instead of saying
	7, 9, 17, we say 7, 17.

If you want to improve your speed in adding, you must know by heart all the possible sums of two numbers.

Review of Multiplication Tables

In this Section you will be doing quite a bit of work with multiplying whole numbers. Do you find this work hard or easy? If you find it hard, the problem likely is that you do not know your multiplication tables as you should. You should know the multiplication tables at least up to 12 x 12. Go over the table on the next page until you can call off all products with speed and accuracy. Jump around the table haphazardly until all products are automatic.

The time you spend on this review will certainly pay dividends in doing later work in this course.

When you are sure you know the table, do **Send-In Activity 1 A**.

Multiplication Table

<u>1 times</u>	<u>2 times</u>	<u>3 times</u>	<u>4 times</u>	<u>5 times</u>
1x1=1	2x1=2	3x1=3	4x1=4	5x1=5
1x 2= 2	2x 2= 4	3x2=6	4 x 2 = 8	5x2=10
1x 3 = 3	2x3 =6	3 x3 = 9	4 x3 =12	5 x3= 15
1x 4 = 4	2x4 = 8	3x4=12	4 x4 =16	5 x4= 20
1x 5= 5	2x5=10	3x5=15	4 x5 = 20	5x5=25
1x6 =6	2x6=12	3x6=18	4 x6 = 24	5x6=30
1x7 = 7	2x7=14	3x7=21	4 x7 = 28	5x 7= 35
1x 8 = 8	2x8=16	3x8=24	4x8 =32	5x8=40
1x9=9	2x9 =18	3x9=27	4 x9 = 36	5x 9 = 45
1x10 =10	2x10=20	3x10=30	4 x10= 40	5x10= 50
1x11=11	2x11=22	3x11=33	4x11=44	5x11=55
1x12=12	2x12=24	3 x12= 36	4x12 = 48	5x12=60
<u>6 times</u>	<u>7 times</u>	<u>8 times</u>	<u>9 times</u>	<u>10 times</u>
6x1=6	7x1=7	8x1=8	9x1=9	10x1=10
6x2=12	7x2=14	8x2 =16	9x2=18	10x2= 20
6x3=18	7x3=21	8x3=24	9x3 = 27	10x3= 30
6 x4= 24	7x 4= 28	8x4=32	9x4 =36	10x4=40
6x5=30	7x5=35	8x5=40	9x5=45	10x5=50
6 x6= 36	7x6=42	8x6=48	9x6=54	10x6 =60
6x7=42	7x7=49	8x7=56	9x7=63	10x7 = 70
6x8=48	7x8=56	8x8=64	9x8 =72	10x8=80
6 x9= 54	7x9 =63	8x9=72	9x9=81	10x9=90
6x10=60	7x10=70	8x10=80	9x10=90	10 x10 =100
6 x11= 66	7x11=77	8x11=88	9x11=99	10x11= 110
6 x12= 72	7x12=84	8x12=96	9x12=108	10x12=120
<u>11 times</u>	<u>12 times</u>	<u>13 times</u>	<u>14 times</u>	<u>15 times</u>
11x1=11	12x1=12	13x1=13	14x1=14	15x1=15
11x2=22	12x2=24	13x2=26	14x 2= 28	15x2=30
11x3=33	12x3=36	13 x3= 39	14x3=42	15x3=45
11x4=44	12x4=48	13x4=52	14 x4 =56	15x4 =60
11x5=55	12x5 =60	13x5=65	14x5=70	15x5=75
11x6=66	12x6=72	13 x6 = 78	14x6=84	15x6 =90
11x7=77	12x7 =84	13x7=91	14x7=98	15 x7 =105
11x8=88	12x8=96	13x8=104	14x8=112	15x8=120
11x9=99	12x9=108	13x9=117	14x9=126	15 x9 =135
11x10 =110	12x10 =120	13x10 =130	14 x10 =140	15x10 =150
11x11=121	12x11=132	13 x11= 143	14x11=154	15x11=165
11x12=132	12x12=144	13x12=156	14x12=168	15x12=180

Send-In Activity 1 A

These exercises are mainly to sharpen your skills with whole numbers. **Please show your work.** You may only use a calculator to check your answers.

1. Calculate:

$$\begin{array}{r} \text{(a) } 5718 \\ 3176 \\ + 814 \\ \hline \end{array}$$

$$\begin{array}{r} \text{(b) } 10\,418 \\ 51\,414 \\ + 3\,198 \\ \hline \end{array}$$

$$\text{(c) } 481 - 84 =$$

$$\begin{array}{r} \text{(d) } 50\,000 \\ - 13\,476 \\ \hline \end{array}$$

$$\begin{array}{r} \text{(e) } 847 \\ \times 98 \\ \hline \end{array}$$

$$\begin{array}{r} \text{(f) } 908 \\ \times 907 \\ \hline \end{array}$$

2. Find each quotient. Record the remainder, if there is one. **Show all your work.**

(a) $82 \overline{)498\,806}$

(b) $\frac{31\,434}{39}$ (note: this means division)

3. Calculate the following and show all work:

(a)
$$\begin{array}{r} 4783 \\ + 3128 \\ \hline \end{array}$$

(b)
$$\begin{array}{r} 3876 \\ + 128 \\ \hline \end{array}$$

c. $384 + 147 + 803 =$

$$\begin{array}{r} 4741 \\ - 1358 \\ \hline \end{array}$$

$$\begin{array}{r} (e) \quad 73 \\ \quad \times 58 \\ \hline \end{array}$$

_____ marks out of a possible 13

DIVISIBLE BY	RULE	NUMBER TO BE DIVIDED IS 20 403
+ 2	the number must be even	not divisible by 2 (last number is odd)
÷ 3	the sum of the digits can be divided evenly by 3	divisible by 3 (since $2 + 0 + 4 + 0 + 3 = 9 \div 3$)
+ 4	the last 2 digits can be divided evenly by 4	not divisible by 4 (since 3 cannot be divided by 4)
÷ 5	number ends in a 5 or 0	not divisible by 5 (last digit not 0 or 5)
+ 6	number is even and sum of digits are divisible by 3	not divisible by 6 (although sum of digits can be divided by 3, it is not even)
+ 8	the last 3 digits can be divided evenly by 8	not divisible by 8 (since 403 cannot be divided by 8)
+ 9	the sum of the digits can be divided evenly by 9	divisible by 9 (since $2 + 0 + 4 + 0 + 3 = 9 \div 9$)
+ 10	number ends in a 0	not divisible by 10 (number does not end in a 0)

You will find that these rules will save you a lot of time when working with prime and composite numbers, as well as when you study factoring in Section 3.

**Self Test**

1. Which numbers listed below are divisible by 3?

3240 3538 4617 9486 5752

2. Which numbers below are divisible by 4?

1224 3118 4664 26 872 15 196

Answers:

1. 3240, 4617, 9486 are divisible by 3.
2. 1224, 4664, 26 872 and 15 196 are divisible by 4.

How did you do? If you had any trouble, review the rules listed in the chart in this Lesson.

Now complete **Send-In Activity 1 B** on following pages.

Don't forget to time yourself on it.



Send-In Activity 1 B

1. Review of whole numbers:

(a) (a) $286 + 37 + 592 + 413 + 92 =$

(b)
$$\begin{array}{r} 378 \\ \times 96 \\ \hline \end{array}$$

(c)
$$36 \overline{)27\,492}$$

(d)
$$\begin{array}{r} 2\,137 \\ 9\,684 \\ 3\,119 \\ \hline +7\,787 \end{array}$$

(e)
$$\begin{array}{r} 31\,724 \\ - 29\,876 \\ \hline \end{array}$$

2. Use the following list of numbers to answer the questions below. (0.5 mark for each correct answer for a total of 10 marks). The number of answers for each question will vary.

684	745	1090	26 888	4955
28 341	98	48 323	9096	870

(a) Which of the numbers are divisible by 2?

(b) Which of the numbers are divisible by 3?

(c) Which of the numbers are divisible by 5?

(d) Which of the numbers are divisible by 8?

(e) Which of the numbers are divisible by 9?

(f) Which numbers are divisible by 10?

3. Fill in the blanks. (3 marks)

(a) Numbers divisible by five must end in a _____ or a _____ .

(b) If a number is divisible by 9, the the sum of the digits is

(c) If a number is divisible by 6, it must be _____

4. Circle the number(s) which are NOT divisible by 6. (2 marks)

51

3 246

117

899

5. Place the correct symbol in the space provided between the pairs of fractions to make the statement true. (5 marks)

Use one of the symbols: < > =

(a) $\frac{1}{2}$ $\frac{2}{4}$

(b) $\frac{3}{8}$ $\frac{1}{4}$

(c) $\frac{1}{3}$ $\frac{3}{6}$

(d) $\frac{5}{8}$ $\frac{5}{7}$

(e) $\frac{3}{5}$ $\frac{3}{4}$

Total _____ marks out of a possible 25