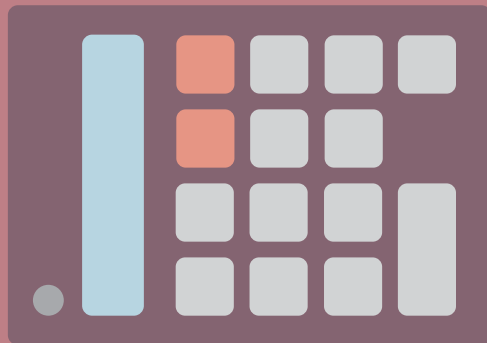




MATH

Teacher's Guide



► **5th Grade**

.....

MATH 500

Teacher's Guide

LIFEPAC® Overview **5**

MATH: SCOPE AND SEQUENCE | 7

STRUCTURE OF THE LIFEPAC CURRICULUM | 12

TEACHING SUPPLEMENTS | 18

Unit 1: Place Value, Addition, and Subtraction **25**

ANSWER KEYS | 26

ALTERNATE LIFEPAC TEST | 37

Unit 2: Multiplying Whole Numbers and Decimals **39**

ANSWER KEYS | 40

ALTERNATE LIFEPAC TEST | 51

Unit 3: Dividing Whole Numbers and Decimals **53**

ANSWER KEYS | 54

ALTERNATE LIFEPAC TEST | 69

Unit 4: Algebra and Graphing **71**

ANSWER KEYS | 72

ALTERNATE LIFEPAC TEST | 85

Unit 5: Measurement **87**

ANSWER KEYS | 88

ALTERNATE LIFEPAC TEST | 101

Author:

Glynlyon Staff

Editor:

Alan Christopherson, M.S.



804 N. 2nd Ave. E.

Rock Rapids, IA 51246-1759

© MMXV by Alpha Omega Publications, a division of Glynlyon, Inc. All rights reserved. LIFEPAAC is a registered trademark of Alpha Omega Publications, a division of Glynlyon, Inc.

All trademarks and/or service marks referenced in this material are the property of their respective owners. Alpha Omega Publications, a division of Glynlyon, Inc. makes no claim of ownership to any trademarks and/or service marks other than their own and their affiliates, and makes no claim of affiliation to any companies whose trademarks may be listed in this material, other than their own.

Unit 6: Factors and Fractions **103**

ANSWER KEYS | 104

ALTERNATE LIFEPAC TEST | 117

Unit 7: Fraction Operations **119**

ANSWER KEYS | 120

ALTERNATE LIFEPAC TEST | 133

Unit 8: Data Analysis and Probability **135**

ANSWER KEYS | 136

ALTERNATE LIFEPAC TEST | 149

Unit 9: Geometry **153**

ANSWER KEYS | 154

ALTERNATE LIFEPAC TEST | 167

Unit 10: Perimeter, Area, and Volume **171**

ANSWER KEYS | 172

ALTERNATE LIFEPAC TEST | 183

Math Terms Glossary **187**

STRUCTURE OF THE LIFEPAC CURRICULUM

The LIFEPAC curriculum is conveniently structured to provide one teacher handbook containing teacher support material with answer keys and ten student worktexts for each subject at grade levels two through twelve. The worktext format of the LIFEPACs allows the student to read the textual information and complete workbook activities all in the same booklet. The easy to follow LIFEPAC numbering system lists the grade as the first number(s) and the last two digits as the number of the series. For example, the Language Arts LIFEPAC at the 6th grade level, 5th book in the series would be LAN0605.

Each LIFEPAC is divided into 3 to 5 sections and begins with an introduction or overview of the booklet as well as a series of specific learning objectives to give a purpose to the study of the LIFEPAC. The introduction and objectives are followed by a vocabulary section which may be found at the beginning of each section at the lower levels or in the glossary at the high school level. Vocabulary words are used to develop word recognition and should not be confused with the spelling words introduced later in the LIFEPAC. The student should learn all vocabulary words before working the LIFEPAC sections to improve comprehension, retention, and reading skills.

Each activity or written assignment has a number for easy identification, such as 1.1. The first number corresponds to the LIFEPAC section and the number to the right of the decimal is the number of the activity.

Teacher checkpoints, which are essential to maintain quality learning, are found at various

locations throughout the LIFEPAC. The teacher should check 1) neatness of work and penmanship, 2) quality of understanding (tested with a short oral quiz), 3) thoroughness of answers (complete sentences and paragraphs, correct spelling, etc.), 4) completion of activities (no blank spaces), and 5) accuracy of answers as compared to the answer key (all answers correct).

The self test questions are also number coded for easy reference. For example, 2.015 means that this is the 15th question in the self test of Section 2. The first number corresponds to the LIFEPAC section, the zero indicates that it is a self test question, and the number to the right of the zero the question number.

The LIFEPAC test is packaged at the centerfold of each LIFEPAC. It should be removed and put aside before giving the booklet to the student for study.

Answer and test keys have the same numbering system as the LIFEPACs. The student may be given access to the answer keys (not the test keys) under teacher supervision so that he can score his own work.

A thorough study of the Curriculum Overview by the teacher before instruction begins is essential to the success of the student. The teacher should become familiar with expected skill mastery and understand how these grade-level skills fit into the overall skill development of the curriculum. The teacher should also preview the objectives that appear at the beginning of each LIFEPAC for additional preparation and planning.

TEST SCORING AND GRADING

Answer keys and test keys give examples of correct answers. They convey the idea, but the student may use many ways to express a correct answer. The teacher should check for the essence of the answer, not for the exact wording. Many questions are high level and require thinking and creativity on the part of the student. Each answer should be scored based on whether or not the main idea written by the student matches the model example. "Any Order" or "Either Order" in a key indicates that no particular order is necessary to be correct.

Most self tests and LIFEPAC tests at the lower elementary levels are scored at 1 point per answer; however, the upper levels may have a point system awarding 2 to 5 points for various answers or questions. Further, the total test points will vary; they may not always equal 100 points. They may be 78, 85, 100, 105, etc.

Example 1

58 72	SCORE _____	TEACHER _____	initials	date
----------	--------------------	----------------------	----------	------

Example 2

84 105	SCORE _____	TEACHER _____	initials	date
-----------	--------------------	----------------------	----------	------

A score box similar to ex. 1 above is located at the end of each self test and on the front of the LIFEPAC test. The bottom score, 72, represents the total number of points possible on the test. The upper score, 58, represents the number of points your student will need to receive an 80% or passing grade. If you wish to establish the exact percentage that your student has achieved, find the total points of his correct answers and divide it by the bottom number (in this case 72). For example, if your student has a point total of 65, divide 65 by 72 for a grade of 90%. Referring to ex. 2, on a test with a total of 105 possible points, the student would have to receive a minimum of 84 correct points for an 80% or passing grade. If your student has received 93 points, simply divide the 93 by 105 for a percentage grade of 89%. Students who receive a score below 80% should review the LIFEPAC and retest using the appropriate Alternate Test found in the Teacher's Guide.

The following is a guideline to assign letter grades for completed LIFEPACs based on a maximum total score of 100 points.

Example:

LIFEPAC Test	=	60% of the Total Score (or percent grade)
Self Test	=	25% of the Total Score (average percent of self tests)
Reports	=	10% or 10* points per LIFEPAC
Oral Work	=	5% or 5* points per LIFEPAC

*Determined by the teacher's subjective evaluation of the student's daily work.

Example:

LIFEPAC Test Score	=	92%	$92 \times .60 = 55$ points
Self Test Average	=	90%	$90 \times .25 = 23$ points
Reports	=		8 points
Oral Work	=		4 points

TOTAL POINTS = 90 points

Grade Scale based on point system:

100 – 94	=	A
93 – 86	=	B
85 – 77	=	C
76 – 70	=	D
Below 70	=	F

TEACHER HINTS AND STUDYING TECHNIQUES

LIFEPAC activities are written to check the level of understanding of the preceding text. The student may look back to the text as necessary to complete these activities; however, a student should never attempt to do the activities without reading (studying) the text first. Self tests and LIFEPAC tests are never open book tests.

Language arts activities (skill integration) often appear within other subject curriculum. The purpose is to give the student an opportunity to test his skill mastery outside of the context in which it was presented.

Writing complete answers (paragraphs) to some questions is an integral part of the LIFEPAC curriculum in all subjects. This builds communication and organization skills, increases understanding and retention of ideas, and helps enforce good penmanship. Complete sentences should be encouraged for this type of activity. Obviously, single words or phrases do not meet the intent of the activity, since multiple lines are given for the response.

Review is essential to student success. Time invested in review where review is suggested will be time saved in correcting errors later. Self tests, unlike the section activities, are closed book. This procedure helps to identify weaknesses before they become too great to overcome. Certain objectives from self tests are cumulative and test previous sections; therefore, good preparation for a self test must include all material studied up to that testing point.

The following procedure checklist has been found to be successful in developing good study habits in the LIFEPAC curriculum.

1. Read the introduction and Table of Contents.
2. Read the objectives.
3. Recite and study the entire vocabulary (glossary) list.
4. Study each section as follows:
 - a. Read the introduction and study the section objectives.
 - b. Read all the text for the entire section, but answer none of the activities.
 - c. Return to the beginning of the section and memorize each vocabulary word and definition.
 - d. Reread the section, complete the activities, check the answers with the answer key, correct all errors, and have the teacher check.
 - e. Read the self test but do not answer the questions.
 - f. Go to the beginning of the first section and reread the text and answers to the activities up to the self test you have not yet done.
 - g. Answer the questions to the self test without looking back.
 - h. Have the self test checked by the teacher.
 - i. Correct the self test and have the teacher check the corrections.
 - j. Repeat steps a-i for each section.
5. Use the SQ3R method to prepare for the LIFEPAC test.
 - Scan the whole LIFEPAC.
 - Question yourself on the objectives.
 - Read the whole LIFEPAC again.
 - Recite through an oral examination.
 - Review weak areas.
6. Take the LIFEPAC test as a closed book test.
7. LIFEPAC tests are administered and scored under direct teacher supervision. Students who receive scores below 80% should review the LIFEPAC using the SQ3R study method and take the Alternate Test located in the Teacher Handbook. The final test grade may be the grade on the Alternate Test or an average of the grades from the original LIFEPAC test and the Alternate Test.

GOAL SETTING AND SCHEDULES

Each school must develop its own schedule, because no single set of procedures will fit every situation. The following is an example of a daily schedule that includes the five LIFEPAC subjects as well as time slotted for special activities.

Possible Daily Schedule

8:15	-	8:25	Pledges, prayer, songs, devotions, etc.
8:25	-	9:10	Bible
9:10	-	9:55	Language Arts
9:55	-	10:15	Recess (juice break)
10:15	-	11:00	Math
11:00	-	11:45	History & Geography
11:45	-	12:30	Lunch, recess, quiet time
12:30	-	1:15	Science
1:15	-		Drill, remedial work, enrichment*

***Enrichment:** *Computer time, physical education, field trips, fun reading, games and puzzles, family business, hobbies, resource persons, guests, crafts, creative work, electives, music appreciation, projects.*

Basically, two factors need to be considered when assigning work to a student in the LIFEPAC curriculum.

The first is time. An average of 45 minutes should be devoted to each subject, each day. Remember, this is only an average. Because of extenuating circumstances a student may spend only 15 minutes on a subject one day and the next day spend 90 minutes on the same subject.

The second factor is the number of pages to be worked in each subject. A single LIFEPAC is designed to take 3 to 4 weeks to complete. Allowing about 3 to 4 days for LIFEPAC introduction, review, and tests, the student has approximately 15 days to complete the LIFEPAC pages. Simply take the number of pages in the LIFEPAC, divide it by 15 and you will have the number of pages that must be completed on a daily basis to keep the student on schedule. For example, a LIFEPAC containing 45 pages will require 3 completed pages per day. Again, this is only an average. While working a 45-page LIFEPAC, the student may complete only 1 page the first day if the text has a lot of activities or reports, but go on to complete 5 pages the next day.

Long-range planning requires some organization. Because the traditional school year originates in the early fall of one year and continues to late spring of the following year, a calendar should be devised that covers this period of time. Approximate beginning and completion dates can be noted on the calendar as well as special occasions such as holidays, vacations and birthdays. Since each LIFEPAC takes 3 to 4 weeks or eighteen days to complete, it should take about 180 school days to finish a set of ten LIFEPACs. Starting at the beginning school date, mark off eighteen school days on the calendar and that will become the targeted completion date for the first LIFEPAC. Continue marking the calendar until you have established dates for the remaining nine LIFEPACs making adjustments for previously noted holidays and vacations. If all five subjects are being used, the ten established target dates should be the same for the LIFEPACs in each subject.

INSTRUCTIONS FOR FIFTH GRADE MATH

The LIFEPAC curriculum from grades two through twelve is structured so that the daily instructional material is written directly into the LIFEPACs. The student is encouraged to read and follow this instructional material in order to develop independent study habits. The teacher should introduce the LIFEPAC to the student, set a required completion schedule, complete teacher checks, be available for questions regarding both content and procedures, administer and grade tests, and develop additional learning activities as desired. Teachers working with several students may schedule their time so that students are assigned to a quiet work activity when it is necessary to spend instructional time with one particular student.

Math is a subject that requires skill mastery. But skill mastery needs to be applied toward

active student involvement. Measurements require measuring cups, rulers, empty containers. Boxes and other similar items help the study of solid shapes. Construction paper, beads, buttons, and beans are readily available and can be used for counting, base ten, fractions, sets, grouping, and sequencing. Students should be presented with problem situations and be given the opportunity to find their solutions.

Any workbook assignment that can be supported by a real-world experience will enhance the student's ability for problem solving. There is an infinite challenge for the teacher to provide a meaningful environment for the study of math. It is a subject that requires constant assessment of student progress. Do not leave the study of math in the classroom.

MATH 501

Unit 1: Place Value, Addition, and Subtraction

ANSWER KEYS

SECTION 1

- 1.1** a. 2
b. 4
c. 6
d. 3
e. 1
f. 5

1.2 b

1.3 d

1.4 c

1.5 a

1.6 b

1.7 d

1.8 Answers will vary. Students should write a number that has a 7 in the thousands place. One example is 87,000.

1.9 a

1.10 d

1.11 c

1.12 b

1.13 eight million, four hundred nine thousand, one hundred twenty

Students should use commas correctly and not use the word *and*.

1.14 a

1.15 c

1.16 d

1.17 d

1.18 a. 2
b. 1

1.19 a

1.20 a

1.21 b

1.22 b

1.23 c

1.24 a

1.25 d

1.26 c

1.27 b

Earth is 149,598,262 kilometers from the Sun, and Venus is 108,209,475 kilometers from the Sun. So, Earth is farther from the Sun than Venus.

1.28 4,506 4,522 4,690 4,692
1.29 945,230 1,249,000 1,853,100 50,489,200

- 1.30** a. 2
b. 1
c. 4
d. 3

- 1.31** a. 4
b. 2
c. 3
d. 5
e. 1

1.32 true

1.33 d

1.34 a

1.35 b

1.36 d

1.37 d

1.38 c

1.39 a

1.40 c

1.41 b

1.42 a

1.43 d

1.44 b

1.45 a

1.46 a

1.47 b

1.48 c

1.49 greater, larger, larger in value, etc.

1.50 c

1.51 c

1.52 0.004 0.04 0.044 0.404

1.53 5.07 5.2 6.035 6.305

1.54 10.08 10.175 10.5 10.54

1.55 b

1.56 c

1.57 a

1.58 a

1.59 b

1.60 b

1.61 a

1.62 d

1.63 0.45 0.7 0.963

1.64 2.008 2.08 2.8

1.65 5.899 15.2 50.76 150.0

1.66 9.15 9.3 9.376 9.51

SELF TEST 1

1.01 false

Whole numbers do not use the word *and*.

1.02 true

1.03 ten thousands

1.04 c

1.05 d

1.06 a

1.07 b

1.08 a

1.09 b

1.010 b

1.011 c

1.012 232,407 232,411 235,116 235,305

1.013 5.0 5.008 5.15

1.014 9

1.015 3

SECTION 2

2.1 rounding

2.2 c

The digit to the right of the hundreds place (7) is greater than 5, so round 5 up to 6.

2.3 b

The digit to the right of the millions place (9) is greater than 5, so round 8 up to 9.

2.4 a

7 is in the hundreds place. The digit to the right of the hundreds place (0) is less than 5, so keep 7 the same.

2.5 d

0 is in the tens place. The digit to the right of the tens place (3) is less than 5, so keep 0 the same.

2.6 c

9 is in the thousands place. The digit to the right of the thousands place is greater than 5, so round 9 up to 10.

2.7 b

The digit to the right of the tenths place (7) is greater than 5, so round 3 up to 4.

2.8 d

The digit to the right of the hundredths place (2) is less than 5, so keep 9 the same.

2.9 b

8 is in the ones place. The digit to the right of the ones place (5) is 5 so round 8 up to 9.

2.10 b

9 is in the tenths place. The digit to the right of the tenths place (7) is greater than 5, so round 9 up to 10.

2.11 a

3 is in the hundredths place. The digit to the right of the hundredths place (1) is less than 5, so keep 3 the same.

2.12 Answers will vary. The number should be a whole number between 650 and 749.

2.13 Answers will vary. The number should be a decimal number between 0.250 and 0.349.

2.14 a

2.15 b

2.16 c

2.17 d

2.18 a. 3

b. 2

c. 1

2.19 false

The largest place value they share is the tens place.

2.20 true

2.21 b

2.22 c

$$1,000 + 9,000 = 10,000$$

2.23 d

$$180 - 60 = 120$$

2.24 a

$$22 + 4 + 2 = 28$$

2.25 c

$$6 - 1 = 5$$

2.26 b

$$700 + 600 = 1,300$$

2.27 a

$$700 - 600 = 100$$

2.28 c

$$\$10 + \$10 + \$20 = \$40$$

2.29 d

$$18 - 7 = 11$$

2.30 a. 2

b. 4

c. 3

d. 1

2.31 a. 2

b. 5

c. 1

d. 4

e. 3

2.32 mental math, mental addition, etc.

2.33 c

2.34 b

2.35 a

2.36 c

2.37 93

$$28 + 60 = 88$$

$$88 + 5 = 93$$

2.38 77

$$14 + 6 = 20$$

$$20 + 57 = 77$$

2.39 290

$$80 + 40 = 120$$

$$120 + 100 = 220$$

$$220 + 70 = 290$$

2.40 682

$$432 + 200 = 632$$

$$632 + 50 = 682$$

2.41 45

$$82 - 30 = 52$$

$$52 - 7 = 45$$

2.42 934

$$1,254 - 300 = 954$$

$$954 - 20 = 934$$

2.43 416

$$532 - 100 = 432$$

$$432 - 10 = 422$$

$$422 - 6 = 416$$

2.44 c

2.45 c

2.46 c

2.47 d

SELF TEST 2

2.01 false

The largest place value they have in common is the ones place.

2.02 true

2.03 b

2.04 b

The digit to the right of the hundreds place (2) is less than 5, so keep 9 the same. The digits to the right of the hundreds place become zeros.

2.05 a

1 is in the thousands place. The digit to the right of the thousands place (7) is greater than 5, so round 1 up to 2. The digits to the right of the thousands place become zeros.

2.06 b

4 is in the ones place. The digit to the right of the ones place (2) is less than 5, so keep 4 the same. The digits to the right of the ones place become zeros.

2.07 c

The digit to the right of the hundreds place (6) is greater than 5, so round 9 up to 10. The 4 becomes 5 and the 9 becomes a zero. The digits to the right of the hundredths place become zeros.

2.08 b

$$5 + 9 = 14$$

2.09 b

$$9,000 - 4,000 = 5,000$$

2.010 a

$$130 + 60 = 190$$

2.011 c

$$\$5 - \$2 = \$3$$

2.012 c

2.013 76

$$49 + 20 = 69$$

$$69 + 7 = 76$$

2.014 275

$$40 + 15 = 55$$

$$220 + 55 = 275$$

2.015 273

$$578 - 300 = 278$$

$$278 - 5 = 273$$

SECTION 3

3.1 9,750

3.2 b

$$\begin{array}{r} 11 \\ 497 \\ + 184 \\ \hline 681 \end{array}$$

3.3 a

$$\begin{array}{r} 11 \\ 3,448 \\ + 680 \\ \hline 4,128 \end{array}$$

3.4 c

$$\begin{array}{r} 1121 \\ 25,180 \\ 5,144 \\ + 1,887 \\ \hline 32,211 \end{array}$$

3.5 114,782

$$\begin{array}{r} 11 \\ 59,466 \\ + 55,316 \\ \hline 114,782 \end{array}$$

3.6 d

$$\begin{array}{r} 99 \\ 7\cancel{0}\cancel{0}^{10} \\ 8,000 \\ - 452 \\ \hline 7,548 \end{array}$$

3.7 a

$$\begin{array}{r} 511812 \\ 6,102 \\ - 5,737 \\ \hline 457 \end{array}$$

3.8 c

$$\begin{array}{r} 28,478 \\ - 13,326 \\ \hline 15,152 \end{array}$$

3.9 28,650

$$\begin{array}{r} 814 \\ 59,466 \\ - 30,816 \\ \hline 28,650 \end{array}$$

3.10 a. 6

b. 2

c. 5

d. 4

e. 3

f. 1

3.11 a. 2

b. 4

c. 3

d. 1

3.12 845

3.13 b

$$\begin{array}{r} 1 \\ 42.7 \\ + 11.4 \\ \hline 54.1 \end{array}$$

3.14 a

$$\begin{array}{r} 11 \\ 31.25 \\ + 9.38 \\ \hline 40.63 \end{array}$$

3.15 c

$$\begin{array}{r} 0.29 \\ + 10.70 \\ \hline 10.99 \end{array}$$

3.16 d

$$\begin{array}{r} 1 \\ 16.24 \\ + 15.00 \\ \hline 31.24 \end{array}$$

3.17 c

$$\begin{array}{r} 1 \\ 18.10 \\ 7.60 \\ + 4.24 \\ \hline 29.94 \end{array}$$

3.18 a

$$\begin{array}{r} 4.00 \\ 6.41 \\ + 3.20 \\ \hline 13.61 \end{array}$$

3.19 b

$$\begin{array}{r} 11 \\ 15.25 \\ 13.80 \\ + 16.40 \\ \hline 45.45 \end{array}$$

3.20 d

$$\begin{array}{r} 2.25 \\ + 1.50 \\ \hline 3.75 \end{array}$$

3.21 98.8

$$\begin{array}{r} 93.0 \\ + 5.8 \\ \hline 98.8 \end{array}$$

3.22 11.08

$$\begin{array}{r} 1 \\ 7.48 \\ + 3.60 \\ \hline 11.08 \end{array}$$

3.23 b

3.24 a

3.25 c

3.26 c

3.27 c

3.28 62.2

$$\begin{array}{r} 88.9 \\ - 26.7 \\ \hline 62.2 \end{array}$$

3.29 5.26

$$\begin{array}{r} 711 \\ 8.17 \\ - 2.91 \\ \hline 5.26 \end{array}$$

3.30 7.4

$$\begin{array}{r} 11 \\ 0 \cancel{1} 10 \\ \cancel{12.0} \\ - 4.6 \\ \hline 7.4 \end{array}$$

3.31 17.88

$$\begin{array}{r} 37.88 \\ - 20.00 \\ \hline 17.88 \end{array}$$

3.32 20.89

$$\begin{array}{r} 612 \\ 2\cancel{7}.\cancel{7}9 \\ - 6.40 \\ \hline 20.89 \end{array}$$

3.33 b

$$\begin{array}{r} 10 \\ 2 \cancel{0} 14 \\ \cancel{3.14} \\ - 2.65 \\ \hline 0.49 \end{array}$$

3.34 c

$$\begin{array}{r} \$3.14 \\ + 2.65 \\ \hline \$5.79 \end{array} \quad \begin{array}{r} \$10.00 \\ - 5.79 \\ \hline \$4.21 \end{array}$$

3.35 a

$$\begin{array}{r} 110 \\ 7.\cancel{2}\cancel{0} \\ - 7.08 \\ \hline 0.12 \end{array}$$

3.36 3.6

3.37 3.37

3.38 15.8

3.39 7.41

3.40 15.38

3.41 13.5

3.42 16.74

3.43 16.08

3.44 7.7

SELF TEST 3

3.01 false

Round each number to the highest place value they have in common, the hundreds. $3,800 + 500 = 4,300$

3.02 b

3.03 c

$$\begin{array}{r} \\ 18,257 \\ + 39,361 \\ \hline 57,618 \end{array}$$

3.04 a

$$\begin{array}{r} \\ \del{6,774} \\ - 5,615 \\ \hline 609 \end{array}$$

3.05 c

$$\begin{array}{r} \\ 1,450 \\ + 1,250 \\ \hline 2,700 \end{array}$$

3.06 b

$$\begin{array}{r} \\ 1,3\del{07} \\ - 1,046 \\ \hline 316 \end{array}$$

3.07 d

$$\begin{array}{r} \\ \del{7.5} \\ - 2.6 \\ \hline 4.9 \end{array}$$

3.08 b

$$\begin{array}{r} \\ 6.75 \\ 7.10 \\ + 7.25 \\ \hline 21.10 \end{array}$$

3.09 c

$$\begin{array}{r} \\ \$1.39 \\ + 1.85 \\ \hline \$3.24 \end{array}$$

3.010 a

$$\begin{array}{r} \\ \del{5.00} \\ - 3.24 \\ \hline \$1.76 \end{array}$$

3.011 13.84

$$\begin{array}{r} 8.14 \\ + 5.70 \\ \hline 13.84 \end{array}$$

3.012 23.35

$$\begin{array}{r} \\ 14.00 \\ + 9.35 \\ \hline 23.35 \end{array}$$

3.013 12.66

$$\begin{array}{r} 16.78 \\ - 4.12 \\ \hline 12.66 \end{array}$$

3.014 22.6

$$\begin{array}{r} \\ \del{22.0} \\ - 9.4 \\ \hline 22.6 \end{array}$$

SECTION 4

- 4.1 a. 3
b. 8
c. 6
d. 7
e. 11
f. 10
g. 4
h. 15
i. 14
j. 17
k. 1
l. 2
m. 9
n. 5
o. 12
p. 16
q. 13
- 4.2 c
4.3 d
4.4 b
4.5 d
4.6 b

The digit to the right of the tenths place (5) is 5 or larger, so round 9 up to 10.

- 4.7 b

$$40 - 20 = 20$$

- 4.8 a

$$93 - 40 = 53$$

$$53 - 7 = 46$$

- 4.9 c

$$\begin{array}{r} 1 \\ 23.00 \\ + 18.35 \\ \hline 41.35 \end{array}$$

- 4.10 b

$$\begin{array}{r} ^9 ^9 ^9 \\ ^0 ^0 ^0 ^0 ^0 \\ 10,000 \\ - 6,128 \\ \hline 3,872 \end{array}$$

LIFEPAC TEST

1. true
2. false

$$400 + 200 = 600$$

3. 54,900 535,728 535,740 536,312
4. ten millions
5. a
6. b
7. d

$$\begin{array}{r} ^5 ^{10} \\ 135.\cancel{00} \\ - 135.25 \\ \hline 0.35 \end{array}$$

8. a
9. c
10. b
11. d

2 is in the ten thousands place. The digit to the right of it (4) is less than 5, so keep the 2 the same.

12. a
13. c

$$\begin{array}{r} ^2 ^2 \\ \$0.99 \\ \$0.79 \\ + \$1.25 \\ \hline \$3.03 \end{array}$$

14. d

15. b

$$\begin{array}{r} ^5 ^{12} ^8 ^{11} \\ \cancel{67,019} \\ - 48,827 \\ \hline 14,092 \end{array}$$

16. a

$$\begin{array}{r} ^1 ^1 \\ 62,919 \\ + 48,827 \\ \hline 111,746 \end{array}$$

17. 4.14

3 is in the hundredths place. The digit to the right of it (9) is greater than 5, so round 3 up to 4.

18. 13.84

$$\begin{array}{r} 4.30 \\ + 9.54 \\ \hline 13.84 \end{array}$$

19. 3.15

$$\begin{array}{r} ^9 \\ ^5 ^{10} \\ \cancel{6.00} \\ - 2.85 \\ \hline 3.15 \end{array}$$

20. 60

$$90 - 30 = 60$$

ALTERNATE LIFE PAC TEST

1. false

4 is in the thousandths place.

2. true

$$700 - 600 = 100$$

3. 67,500 612,009 612,052 614,100

4. d

5. a

6. a

7. c

$$\begin{array}{r}
 ^7 ^{10} \\
 138.\cancel{0}\cancel{0} \\
 - 138.05 \\
 \hline
 0.75
 \end{array}$$

8. b

9. d

10. a

11. d

The 2 is in the thousands place. The digit to the right of it (4) is less than 5, so keep 2 the same.

12. c

13. a

$$\begin{array}{r}
 ^2 ^2 \\
 \$1.45 \\
 \$0.89 \\
 + \$0.79 \\
 \hline
 \$3.13
 \end{array}$$

14. b

$$158 + 6 = 164$$

15. b

$$\begin{array}{r}
 ^6 ^{14} ^2 ^{10} \\
 \cancel{67,430} \\
 - 35,614 \\
 \hline
 31,816
 \end{array}$$

16. a

$$\begin{array}{r}
 ^1 ^1 \\
 35,614 \\
 + 67,430 \\
 \hline
 103,044
 \end{array}$$

17. 15.7

The 6 is in the tenths place. The digit to the right of it (8) is greater than 5, so round 6 up to 7.

18. 14.92

$$\begin{array}{r}
 6.50 \\
 + 8.42 \\
 \hline
 14.92
 \end{array}$$

19. 4.55

$$\begin{array}{r}
 ^9 \\
 ^7 ^1 ^{10} \\
 \cancel{8.00} \\
 - 3.45 \\
 \hline
 4.55
 \end{array}$$

20. 80

$$20 + 60 = 80$$

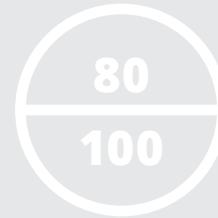
MATH 501

ALTERNATE LIFEPAC TEST

NAME _____

DATE _____

SCORE _____



Each numbered question = 5 points.

Answer *true* or *false*.

- _____ In the number 6.814, 4 is in the hundredths place.
- _____ Using rounding, a good estimate for $712 - 589$ is 100.

Place these numbers in order from smallest to largest.

3. 612,052 614,100 612,009 67,500

Circle the correct letter and answer.

- In the number 82,129,000,000, the digit 1 is in the _____ place.
 a. billions b. ten billions c. millions d. hundred millions
- Compare using $<$, $>$, or $=$. 915,000,000 _____ 2,140,000,000
 a. $<$ b. $>$ c. $=$
- Bennett is 138.8 centimeters tall, Garrett is 138.45 centimeters tall, and Kayla is 138.05 centimeters tall. Who is the tallest?
 a. Bennett b. Garrett c. Kayla
- Bennett is 138.8 centimeters tall, Garrett is 138.45 centimeters tall, and Kayla is 138.05 centimeters tall. What is the difference in height between Bennett and Kayla?
 a. 0.3 centimeters b. 0.03 centimeters c. 0.75 centimeters d. 0.4 centimeters
- Which whole number property is demonstrated here? $23 + 2 = 2 + 23$
 a. Associative Property of Addition
 b. Commutative Property of Addition
 c. Identity Property of Addition



804 N. 2nd Ave. E.
Rock Rapids, IA 51246-1759

800-622-3070
www.aop.com

MAT0520 – Jan '16 Printing

ISBN 978-0-7403-3491-7



9 780740 334917