

**SKILLS LIST and SAMPLE TEST ITEMS**

**FOR**

**PRACTICE TEST FOR MATHEMATICS, GRADE 10**

*(Test items developed for skills measured in LA03)*

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**Skills**

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|-----|---|-----|---|
| 1.0 | Number and Number Relations                                 | 4.0 | Geometry  |
| 1.1 | Appropriate Forms of Numbers                                | 4.1 | Two-and Three-Dimensional Figures                 |
| 1.2 | Number Sense and Estimation                                 | 4.2 | Geometric Models                                  |
| 1.3 | Appropriate Methods/Tools                                   | 4.3 | Solving Problems Using Coordinate Methods         |
| 1.4 | Understanding/Applying Proportional Reasoning               | 4.4 | Classify Figures                                  |
| 2.0 | Algebra   | 4.5 | Deductive Reasoning                               |
| 2.1 | Expressions/Equations/Inequalities In Real World Situations | 5.0 | Data Analysis, Probability, and Discrete Math     |
| 2.2 | Solving Equations and Inequalities                          | 5.1 | Sampling, Bias Accuracy, Reasonable of Data, etc. |
| 2.3 | Tables/Graphs   | 5.2 | Match Linear or Non-Linear Data to Graph          |
| 2.4 | Solving Real World Problems                                 | 5.3 | Calculation of Probability                        |
| 3.0 | Measurement   | 5.4 | Make Inferences from Data                         |
| 3.1 | Selecting Appropriate Units of Measure                      | 5.5 | Real-Life Situations                              |
| 3.2 | Estimation Involving Customary and Metric Systems           | 6.0 | Patterns, Relations, and Functions                |
| 3.3 | Estimating/Computing/Applying Physical Measurement          | 6.1 | Tables/Graphs/Equations in Context                |
|     |   | 6.2 | Missing Element/Shape, Patters, etc.              |
|     |   | 6.3 | Functions and Graphs of Functions                 |
|     |   | 6.4 | Changes in Parameters                             |

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Number of questions: 60

Number of pages: 17

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(OVER)

**LA03 PRACTICE TEST IN MATHEMATICS - GRADE 10  
FORM A**

**Part 1**

For questions 1-30, read each question. Mark the correct answer on your answer sheet. You may not use a calculator for this section.

1. The weight of a flea is .00035 pounds. Which of the following correctly expresses that weight in scientific notation?  
A.  $0.35 \times 10^{-3}$   
B.  $35.0 \times 10^{-5}$   
C.  $3.5 \times 10^{-4}$   
D.  $3.5 \times 10^4$
  
2. A deadly plant is growing on Pine Lake. The plant will cause other vegetation to die causing the fish to starve. The plant is growing at a rate of  $y=1.5(3^x)$ , where  $y$  is the area covered by the plant in acres and  $x$  is the number of months. How many acres will be covered in 3 months?  
A. 13.5  
B. 40.5  
C. 85  
D. 125.5
  
3. Marvin worked at the deli from November 1, 1993, until May 1, 1999. He earned 1 day of vacation for each month he worked. During this period, he did not use any of his vacation. Upon his resignation, he will be given \$15 for each unused day of vacation. How much will he receive for his unused vacation days?  
A. \$900  
B. \$990  
C. \$1150  
D. \$1170
  
4. In a floor plan for an apartment 1.2 centimeters = 3 feet. If the length of the dining room floor is 20 feet, what is the length on the floor plan?  
A. 6 centimeters  
B. 8 centimeters  
C. 12 centimeters  
D. 16 centimeters

5. Chris has 3 times as many eggs as Tricia. Tricia has 4 less than Sue. If they doubled the number of eggs that they have, the total would be 128. Which equation will give the correct number of eggs for Sue?  
A.  $s+s-4+s-4=64$   
B.  $s-(s-4)-(3s-4)=64$   
C.  $s+(s-4)+3s-4=128$   
D.  $s+(s-4)+3(s-4)=64$
  
6. Simplify:  $2x(x-1)+3x(x-1)$   
A.  $10x^3$   
B.  $6x^2-6x$   
C.  $5x^2+5x$   
D.  $5x^2-5x$
  
7. Maria is swinging ropes of different lengths. She is recording the length of each rope and the number of seconds it takes to make one swing.

Length (in.)	Time (sec.)
5	25
6	36
7	49
8	64
$x$	

Which function will give her the time in seconds that it will take for a rope, length  $x$ , to make one swing?

- A.  $y=2x$
- B.  $y=x^2$
- C.  $y=x^3$
- D.  $y=2x^2$