

*SKILLS LIST and SAMPLE TEST ITEMS*

*FOR*

**PRACTICE TEST FOR MATHEMATICS, GRADE 8**

*(Test items developed for instructional objectives)*

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*Skills*

- |     |                                      |     |  |
|-----|--------------------------------------|-----|--|
| 1.0 | Number Sense                         | 3.0 | Geometry and Measurement                 |
| 1.1 | Rational Numbers                     | 3.1 | Appropriate Units/Ratios                 |
| 1.2 | Exponents/Powers/Roots               | 3.2 | Perimeter/Area/Volume                    |
| 2.0 | Algebra/Functions                    | 3.3 | Pythagorean Theorem/<br>Geometric Shapes |
| 2.1 | Quantitative Relationships           | 4.0 | Data Analysis/Probability/<br>Statistics |
| 2.2 | Expressions                          | 4.1 | Compute/Analyze                          |
| 2.3 | Linear and Nonlinear<br>Functions    | 4.2 | Samples of Population                    |
| 2.4 | Linear Equations and<br>Inequalities | 4.3 | Probabilities/Predictions                |
|     |                                      | 4.4 | Collect/Organize/Represent<br>Data Sets  |

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Number of questions: 71  
Number of pages: 11  
Approximate testing time: 90 minutes

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(OVER)

**PRACTICE TEST IN MATHEMATICS - GRADE 8  
FORM A**

Read each problem. Choose the correct answer, and mark your answer sheet.

1. The Pacific Ocean has an area of 64,200,000 square miles. How is this number expressed in scientific notation?

A.  $64.2 \times 10^5$  square miles  
 B.  $.642 \times 10^3$  square miles  
 C.  $6.42 \times 10^7$  square miles  
 D.  $.0642 \times 10^{-10}$  square miles

2. The plumber charges \$50 for every service call and \$30 for each hour he spends working on location. Which expression gives the total cost of a repair that takes  $n$  hours?

A.  $80n$   
 B.  $80 + n$   
 C.  $30 + 50 + n$   
 D.  $50 + 30n$

3. If  $a = 2$ , evaluate this expression.

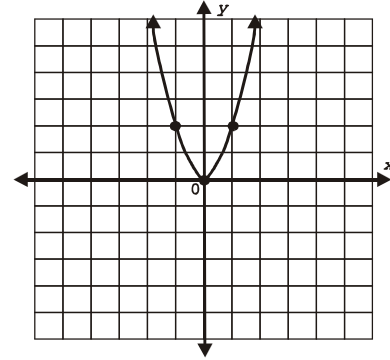
$$15 - a^3 = \underline{\quad}$$

A. 13  
 B. 9  
 C. 8  
 D. 7

4. Which of the following expressions represents another way to write  $6^2 \times 6^3$ ?

A.  $6^6$   
 B.  $36^5$   
 C.  $6^5$   
 D.  $36^6$

5. Which of the following equations matches the graph?

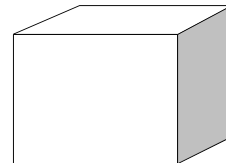


A.  $y = 2x^2$   
 B.  $y = 2x$   
 C.  $y = x + 2$   
 D.  $y = 2x^3$

6. Box A weighs 1.5 kilograms. Box B weighs 156,495 grams. Box C weighs 1.57 milligrams. Box D weighs 157 kilograms. Which of the boxes weighs the most?

A. Box A  
 B. Box B  
 C. Box C  
 D. Box D

7. The box has length 10 inches, width 12 inches, and volume 960 cubic inches. What is the height?



A. 5 inches  
 B. 6 inches  
 C. 7 inches  
 D. 8 inches