

SKILLS LIST and SAMPLE TEST ITEMS

FOR

PRACTICE TEST FOR MATHEMATICS, GRADE 9

(Test items developed for skills measured in Stanford9)*

Skills

- | | |
|------------------------------------|------------------------------------|
| 1.0 Problem Solving | 3.3 Statistics |
| 1.1 Problem Solving Strategies | 3.4 Probability |
| 1.2 Algebra | 3.5 Functions |
| 1.3 Statistics | 3.6 Geometry/Synthetic Perspective |
| 1.4 Probability | 3.7 Geometry/Algebraic Perspective |
| 1.5 Functions | 3.8 Trigonometry |
| 1.6 Geometry/Synthetic Perspective | 3.9 Discrete Mathematics |
| 1.7 Geometry/Algebraic Perspective | 3.10 Calculus |
| 1.8 Trigonometry | 3.11 Problem Solving |
| 1.9 Discrete Mathematics | 3.12 Reasoning |
| 1.10 Calculus | 3.13 Communication |
| 2.0 Related Processes | 3.14 Connections |
| 2.1 Problem Solving | 4.0 Using Information |
| 2.2 Reasoning | 4.1 Statistics |
| 2.3 Communication | 4.2 Trigonometry |
| 2.4 Connections | 4.3 Connections |
| 3.0 Thinking Skills | |
| 3.1 Problem Solving Strategies | |
| 3.2 Algebra | |

Number of questions: 48

Number of pages: 14

Approximate testing time: 45 minutes

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(OVER)

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Stanford9 MATHEMATICS PRACTICE TEST - GRADE 9

1. The length of a rectangle is twice the width. If the length is decreased by 1 and the width increased by 3, the area is 72 mm^2 . What is the original length of the rectangle?
- A. 5 mm B. 10 mm C. 15 mm D. 20 mm
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2. Stanley and Kathleen were making a car trip together. Stanley drove 10 mi/h faster than Kathleen. Stanley drove 120 miles and Kathleen drove 150 miles in total of 5 hours. How fast did Stanley drive?
- A. 50 mi/h B. 55 mi/h C. 60 mi/h D. 65 mi/h
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3. An engineer is trying to fill a water tank that is 25 m tall. Each day the pump runs, it raises the water level 3 m. There is a leak in the tank, and each night when the pump is turned off the water level drops 25 cm. At this rate, how many days will it take for the water to reach the top of the tank?
- A. 4 B. 5 C. 7 D. 9
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4. In a sack of coins there are pennies, nickels, dimes, and quarters. There are twice as many quarters as nickels. There are 8 fewer dimes than quarters. There are 5 more nickels than pennies. There are 13 pennies. How many coins are there in the bag?
- A. 95 B. 82 C. 101 D. 120
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5. At Pinewood High School there are three academic clubs: Library Club, Science Club, and Mathematics Club. Five students are members of all three clubs. One third of the Library Club members and all of the Mathematics Club members belong to the Science Club. There are 24 members of the Library Club, 12 members of the Mathematics Club, and 39 members of the Science Club. How many students belong only to the Science Club?
- A. 20 B. 24 C. 27 D. 32
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