



Helpful Hints for Mastering the MATH SAT

THS Administration: April 9, 2019

There are 2 math sections on the SAT: No-Calculator and Calculator. There are also 2 types of questions in each section: multiple-choice (78%) and student-produced response (22%). The test assesses 3 major content areas:

1. Heart of Algebra (33%) – Analyzing and solving linear equations and systems, understanding and using the relationship between linear equations and inequalities to solve problems
2. Problem-Solving and Data Analysis (29%) – Creating and analyzing relationships, representing and analyzing quantitative data
3. Passport to Advanced Math (28%) – Creating, using, solving and graphing quadratic, exponential, and other nonlinear functions and equations

There is a fourth content area, Additional Topics in Math (10%), which includes geometry, trigonometry, radians, and complex numbers. These 6 questions contribute to the overall math score but do not have a separate subscore.

Take time to familiarize yourself with the table below and the reference section. Knowing the number of questions, time allotted, and distribution of questions in each section will help you to feel confident and prepared on test day.

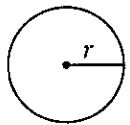
No-Calculator	Calculator
25 Minutes	55 Minutes
20 Questions	38 Questions
#1-15 Multiple-Choice	#1-30 Multiple-Choice
#16-20 Student-Produced Response	#31-38 Student-Produced Response
3 Content Areas Assessed (# Questions):	4 Content Areas Assessed (# Questions):
Heart of Algebra (8)	Heart of Algebra (11)
Passport to Advanced Math (9)	Problem-Solving and Data Analysis (17)
Additional Topics in Math (3)	Passport to Advanced Math (7)
	Additional Topics in Math (3)
Reference Section (formulas) provided	Reference Section (formulas) provided

Testing-Taking Strategies and Tips for both sections:

1. Questions within both sections are arranged from **easy to medium to hard**. Know where you are in the section to look for tricks.
2. There are **2 types of questions**: multiple-choice and student-produced responses.
3. Never leave a question blank! There is no penalty for wrong answers.
4. **Familiarize yourself with the directions** ahead of time. Each section provides you with a reference section, which includes some **formulas and basic facts**.
5. **Read each problem carefully**. Note key words and ask yourself the following questions as you solve each problem: What do I know? What do I have to find? Did I answer the question?

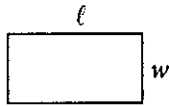
- With some problems, it may be helpful to **draw a diagram** if one is not already provided.
- Use the test book for scratch work.** You will not receive credit for anything written in the booklet, but you will be able to check your work easily later. You are not expected to calculate in your head. Be sure to mark questions that you have skipped and should return to later.
- Eliminate choices.** If you don't know the correct answer to a question, try some of the choices. It's sometimes easier to find the wrong answers than the correct one. On some questions, you can eliminate all the incorrect choices.
- Make sure **your answer is a reasonable solution** to the question asked. This is especially true for the grid-ins where no answer choices are given.
- Figures may not be drawn to scale.** If they are not, it will be indicated.

Mathematics Reference Information:

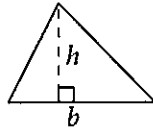


$$A = \pi r^2$$

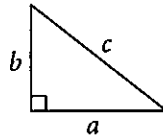
$$C = 2\pi r$$



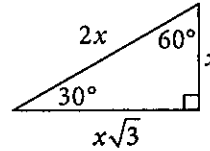
$$A = \ell w$$



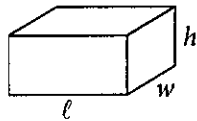
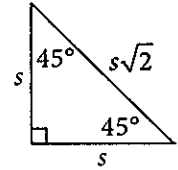
$$A = \frac{1}{2}bh$$



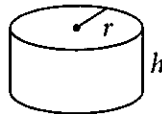
$$c^2 = a^2 + b^2$$



Special Right Triangles



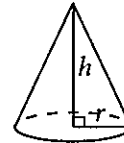
$$V = \ell wh$$



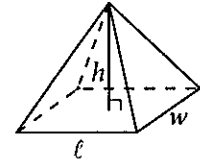
$$V = \pi r^2 h$$



$$V = \frac{4}{3}\pi r^3$$



$$V = \frac{1}{3}\pi r^2 h$$



$$V = \frac{1}{3}\ell wh$$

The number of degrees of arc in a circle is 360. The number of radians of arc in a circle is 2π .

The sum of the measures in degrees of the angles of a triangle is 180.

MULTIPLE-CHOICE Section:

- Read each question carefully. Be sure to select the best answer for the variable, value, or expression that is requested and be sure that you are answering the question (not solving for another part of the problem).
- For questions to which you do not know the answer, use the 4 choices to help you. Often, you can eliminate one or multiple choices based upon the reasonableness of the choice.

STUDENT-PRODUCED RESPONSE Section (Grid-Ins):

- The grid can hold only 4 decimal places and can only accommodate **positive numbers and zero**.
- Mark no more than one circle in each column.
- Write the answer in the top row/boxes to help you grid in the bubbles accurately, but remember that only answers indicated by filling in the circle(s) will be scored.
- It doesn't matter in which column you begin entering answers, but I would suggest starting on the left to avoid making mistakes or not entering enough digits.
- Do not try to enter mixed numbers ($3\frac{1}{2}$) – enter the decimal (3.5) or improper fraction ($\frac{7}{2}$) instead.