

SAT Math topics:

1. Exponents & Radicals:
 - a. Laws of exponents.
 - b. Evaluating expressions with exponents.
 - c. Solving equations with exponents.
 - d. Simplifying square roots.
2. Percent.
 - a. Percent change.
 - b. Compound interest.
 - c. Percent word problems.
3. Exponential vs Linear growth.
 - a. Linear growth and decay.
 - b. Exponential growth and decay.
 - c. Positive and negative association.
4. Rates.
 - a. Conversion factors.
5. Ratio & Proportion.
6. Expressions.
 - a. Combining like terms.
 - b. Expansion and factoring.
 - c. Combining, dividing, and splitting fractions.
7. Constructing models.
8. Manipulating & Solving equations.
 - a. Common mistakes to avoid.
 - b. Tools for isolating variables.
 - c. Strategies for solving complicated equations.

9. More equation solving strategies.

- a. Matching coefficients.
- b. Infinitely many solutions.
- c. No solutions.
- d. Clearing denominators.

10. System of equations.

- a. Substitution.
- b. Elimination.
- c. System with no solutions and finite solutions.
- d. Word problems.
- e. More complex systems.
- f. Graphs of system of equations.

11. Inequalities.

- a. How to solve inequalities.
- b. Inequality word problems.
- c. Graphs of inequalities.

12. Word problems.

13. Minimum & maximum word problems.

14. Lines.

- a. Slope and y-intercept.
- b. Equations of lines: slope-intercept form and point-slope form.
- c. Finding the intersection of two lines.
- d. Parallel and perpendicular lines.
- e. Horizontal and vertical lines.

15. Interpreting linear models.

16. Functions.

- a. What is a function?
- b. When is a function undefined?
- c. Composite functions.
- d. Finding the solutions to a function.
- e. Identifying function graphs.
- f. Function transformations.

17. Quadratics.

- a. Tactics for finding the roots.
- b. Completing the square.
- c. The vertex and vertex form.
- d. Quadratic models.

18. Synthetic division.

- a. Performing synthetic division.
- b. Equivalent expressions.
- c. The remainder theorem.

19. Complex numbers.

20. Absolute value.

21. Angles.

- a. Exterior angle theorem.
- b. Parallel lines.
- c. Polygons.

22. Triangles.

- a. Isosceles and equilateral triangles.
- b. Right triangles.
- c. Special right triangles.

- d. Similar triangles.
- e. Parallel Lines and Proportionality.
- f. Radians.

23. Circles.

- a. Area and circumference.
- b. Arc length.
- c. Area of a sector.
- d. Central and inscribed angles.
- e. Equations of circles.

24. Trigonometry.

- a. Sine, cosine, and tangent.
- b. Trigonometric identities.
- c. Evaluating trigonometric expressions.

25. Reading data.

26. Probability.

27. Statistics I.

- a. Mean, median, and mode.
- b. Range and standard deviation.
- c. Histograms and dot plots.
- d. Word problems involving averages.
- e. Boxplots.

28. Statistics II.

- a. Statistical sampling.
- b. Using and interpreting the lines of the best fit.
- c. Margin error.
- d. Confidence intervals.

e. Experimental design and conclusions.

29. Volume.