



Strategic Time Management Guide for SAT Math

Master the Clock, Maximize Your Score



SAT MATH SECTION OVERVIEW

Section Breakdown

- Module 1: 22 questions in 35 minutes ($\approx 1:35$ per question)
- Module 2: 22 questions in 35 minutes ($\approx 1:35$ per question)
- Total: 44 questions in 70 minutes
- Calculator: Allowed on BOTH modules

The Reality Check

Average time per question is 95 seconds, but not all questions are created equal:

- Easy questions: 30-45 seconds
- Medium questions: 60-90 seconds
- Hard questions: 2-4 minutes

Key Insight: Spending 4 minutes on a hard question means you need to answer 3 easy questions in under 1 minute total!



THE STRATEGIC APPROACH: THREE-PASS SYSTEM

FIRST PASS: The Quick Win (12-15 minutes)

Goal: Answer all questions you can solve in under 60 seconds

What to look for:

-  Basic algebra (solve for x)
-  Simple systems of equations
-  Straightforward percentages
-  Basic geometry (area, perimeter)
-  Simple word problems
-  Direct substitution questions

What to SKIP:

-  Long word problems with multiple steps



- **✗** Complex systems or intersections
- **✗** Questions with unfamiliar concepts
- **✗** Anything that makes you pause for >10 seconds

Result: You should complete 12-15 questions in this pass



SECOND PASS: The Desmos Advantage (15-18 minutes)

Goal: Tackle medium-difficulty questions where Desmos gives you a massive advantage

Prime Desmos Opportunities:

- **✓** "How many solutions" → Graph and count
- **✓** "Maximum/minimum" → Find vertex
- **✓** "Break even" → Find x-intercepts
- **✓** Systems of equations → Graph both, find intersection
- **✓** Quadratic optimization → Vertex of parabola
- **✓** Statistical analysis → Use mean(), median(), stdev()
- **✓** Function intersections → Visual counting
- **✓** Domain/range questions → See from graph

Code Words That Signal "Use Desmos":

- "Intersection"
- "Optimize/maximize/minimize"
- "Growth rate"
- "How many solutions"
- "Break even"
- "Correlation"
- "At what value of x..."

Strategy:

1. Read the question
2. Identify if it's a Desmos-friendly problem
3. Set up in calculator (30-45 seconds)
4. Get answer (15-30 seconds)
5. Move on confidently



Result: Complete 6-8 more questions, total now at 18-23 questions



THIRD PASS: The Deep Think (12-15 minutes)

Goal: Solve remaining challenging problems that require multi-step reasoning

Approach for Hard Questions:

1. Read carefully - underline key information (20 seconds)
2. Identify what's being asked - what's the final answer format? (10 seconds)
3. Choose your method - algebra, Desmos, or hybrid? (10 seconds)
4. Execute and verify - solve, then check with an alternative method (2-3 minutes)
5. If stuck after 90 seconds - make an educated guess, mark for review

Advanced Techniques:

- Work backwards from answer choices (plug in values)
- Eliminate impossible answers before solving
- Use Desmos to verify your algebraic work
- Check units and reasonableness of your answer
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Result: Complete 3-5 more challenging questions



FINAL PASS: The Closer (3-5 minutes)

Goal: Review marked questions and make educated guesses

Priority Order:

1. Marked questions you partially solved - worth another 30-60 seconds
2. Questions you completely skipped - make educated guesses
3. Quick verification of questions you were unsure about

Never leave blanks! There's no penalty for guessing.



QUESTION-SPECIFIC TIME ALLOCATIONS

Spend 30-60 Seconds On:

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- Basic linear equations
- Simple percentages and proportions
- Direct geometric calculations
- Table/chart reading questions
- Simple substitution problems
- Basic arithmetic sequences

Spend 60-120 Seconds On:

- Systems of equations (with Desmos)
- Quadratic optimization problems
- Statistical analysis questions
- Multi-step word problems
- Function transformation questions
- Intermediate geometry (circles, triangles)

Spend 120-180 Seconds On:

- Complex word problems with multiple variables
- Advanced function analysis (cubics, rationals)
- Multi-step geometry proofs
- Complex probability scenarios
- Data interpretation with calculations
- Piecewise function analysis

Spend 180-240 Seconds On:

- Multi-concept integration problems
- Abstract reasoning questions
- Complex optimization scenarios
- Advanced trigonometry applications
- Challenging logic problems

WARNING: If you're spending more than 4 minutes on ANY question, you're sacrificing too much time. Make your best guess and move on.



DESMOS TIME OPTIMIZATION

When Desmos SAVES Time (Use Immediately):

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- Systems of equations: 5 min → 30 sec
- Finding intersections: 4 min → 20 sec
- Optimization (max/min): 6 min → 45 sec
- Statistical calculations: 3 min → 15 sec
- Counting solutions: 4 min → 30 sec
- Verification of work: 2 min → 20 sec

When Desmos WASTES Time (Avoid):

- Simple linear equations (faster by hand)
- Basic arithmetic (use mental math)
- Factoring expressions (Desmos shows decimals)
- Simplifying radicals (Desmos approximates)
- Problems requiring exact symbolic answers

Hybrid Approach (Best Strategy):

1. Solve algebraically first (show work, build understanding)
2. Verify with Desmos (catch errors, confirm answer)
3. Move forward with confidence

Time Investment: Extra 15-20 seconds for verification vs. several minutes redoing the entire problem if you got it wrong!



PACING CHECKPOINTS

10 Minutes In:

- Should have completed: 6-8 questions
- On track pace: Question #6-8
- Behind pace: Still on question #4-5
- Danger zone: Still on question #1-3

20 Minutes In:

- Should have completed: 12-15 questions
- On track pace: Question #12-15
- Behind pace: Question #9-11
- Danger zone: Question #7-8 or below



30 Minutes In:

- ✓ Should have completed: 18-20 questions
- ✓ On track pace: Question #18-20
- ⚠ Behind pace: Question #15-17
- 🚨 Danger zone: Question #13-14 or below

5 Minutes Left:

- ✓ Ideal: Reviewing marked questions, verifying answers
- ✓ Acceptable: On last 1-2 questions
- ⚠ Concerning: Still have 3-4 questions left
- 🚨 Crisis mode: More than 5 questions unanswered



EMERGENCY PROTOCOLS

If You're Running Behind (15+ min mark):

1. Switch to aggressive skipping - only answer questions you can do in <45 seconds
2. Mark ALL uncertain questions - don't waste time deliberating
3. Focus on Desmos wins - prioritize graph-based questions for quick points
4. Make educated guesses on time-intensive problems
5. Aim to see ALL questions before time runs out

If You're Stuck on a Question:

- After 30 seconds of no progress → mark and move on
- After 90 seconds of slow progress → make best guess, mark, move on
- After 2 minutes of any question → commit to answer and advance

If You Finish Early (rare but possible):

1. Review marked questions (highest priority)
2. Verify calculations on problems you rushed
3. Check Desmos work - did you read the graph correctly?
4. Look for careless errors - negative signs, decimal places
5. Don't second-guess solid answers without good reason





ADVANCED TIME-SAVING TACTICS

The Answer Choice Strategy

Many SAT questions have answer choices that guide your work:

- If choices are far apart (2, 15, 47, 103) → rough estimation works
- If choices are close (3.2, 3.4, 3.6, 3.8) → need precise calculation
- Test answer choices in the original equation (often faster than solving)

The Elimination Game

Before fully solving:

1. Eliminate impossible answers (negative when must be positive, etc.)
2. Check units (looking for hours but answer is in minutes?)
3. Use reasonableness (ordering food for 50 people shouldn't cost \$10,000)
4. Reduces guessing to 50/50 or better odds

The Pattern Recognition

Look for shortcuts:

- Special right triangles (30-60-90, 45-45-90) → instant ratios
- Common percentages ($25\% = 1/4$, $20\% = 1/5$) → mental math
- Perfect squares/cubes (recognize immediately)
- Pythagorean triples (3-4-5, 5-12-13) → skip calculation

The Strategic Guessing

When you must guess:

1. Never choose "cannot be determined" unless you're certain
2. Middle values are often correct (avoid extreme choices)
3. Look for patterns in your other answers (avoid all A's or B's)
4. Trust initial instinct - first choice is often correct



PRACTICE SCHEDULE FOR TIME MASTERY

Week 1-2: Build Speed Foundation

- Practice individual topics with loose time limits
- Focus on accuracy over speed
- Identify question types that take you the longest



Week 3-4: Implement Three-Pass System

- Practice full sections using the three-pass approach
- Track time per pass
- Adjust pacing based on results

Week 5-6: Desmos Integration

- Deliberately practice Desmos-friendly problems
- Time yourself: by hand vs. with a calculator
- Build muscle memory for calculator operations

Week 7-8: Full Simulation

- Take full-length practice tests under timed conditions
- Use ALL strategies: three-pass, Desmos, elimination
- Review not just wrong answers but TIME spent per question

Week 9-10: Refinement

- Analyze your time data: where are you slow?
- Do targeted practice on your weak areas
- Final practice tests should feel comfortable, not rushed



THE SCORE-MAXIMIZING FORMULA

Your goal is NOT to answer every question perfectly.

Your goal IS to maximize total points in the time available.

Score Optimization Hierarchy:

1. Get all easy questions right (12-15 questions) = foundation score
2. Capture medium questions with Desmos (6-8 questions) = competitive score
3. Solve some hard questions (3-5 questions) = elite score
4. Make educated guesses on rest (2-4 questions) = bonus points

Result: 23+ correct answers = 600+ score range

Result: 28+ correct answers = 650+ score range

Result: 33+ correct answers = 700+ score range

Result: 38+ correct answers = 750+ score range

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