

Digital SAT Desmos Reference Sheet

A calculator decision guide with exact inputs, high-value shortcuts, and the mistakes that cost time.

Use Desmos when the graph, table, or intersection removes work. If typing the setup takes longer than solving the equation, stay with algebra.

The four-step calculator workflow

Step	What to do	Check before moving on
1. Translate	Turn the prompt into an equation, function, table, or list of points.	Name the requested value and its unit.
2. Enter	Type the mathematical relationship exactly. Use separate lines for separate equations.	Check signs, exponents, parentheses, and restrictions.
3. Read	Use an intersection, intercept, vertex, table value, or regression parameter.	Confirm whether the question wants x , y , or an expression.
4. Verify	Substitute the result or compare it with the answer choices.	Reject extraneous values and impossible units.

High-value moves

Question type	What to enter	What to read
System	Type both equations on separate lines.	Intersection; check whether the answer is x , y , or $x + y$.
Quadratic roots	$y = ax^2 + bx + c$	The x -intercepts, not the vertex.
Maximum or minimum	Type the function and zoom near the turn.	Vertex x and y answer different questions.
Function values	Define $f(x)=\dots$ and open a table.	Read $f(x)$ only at the requested inputs.
Unknown constant	Enter the equation with the constant as a slider.	Adjust or test choices until the required condition is true.
Data model	Enter points in a table, then type $y_1 \sim mx_1 + b$.	Use m and b only when a linear model is requested.
Domain restriction	Append braces, such as $\{0 < x < 10\}$.	Inspect only the interval named in the problem.

Three worked setups

System: For $y = 2x + 5$ and $y = -x + 14$, graph both lines. The intersection is $(3, 11)$. If the prompt asks for $x + y$, report 14 - not 3 or 11 .

Quadratic: For $x^2 - 7x + 10 = 0$, graph $y = x^2 - 7x + 10$. The x -intercepts are 2 and 5 . The vertex is not a solution to the equation.

Regression: Put paired data in x_1 and y_1 , then use $y_1 \sim mx_1 + b$. Read the model parameters, but do not run regression when the prompt merely asks for the slope between two exact points.

Time-saving keyboard and input habits

Action	Shortcut or input
Exponent	Type ^, then enter the exponent.
Subscript	Type _, as in x_1 or y_1 .
Absolute value	Type abs(expression).
Square root	Type sqrt(expression).
Fraction	Use parentheses around the full numerator and denominator.
List	Use brackets, such as [2, 4, 7].
Restriction	Use braces after the expression, such as $y=x^2\{0<x<5\}$.

When Desmos becomes a trap

- One-step percentages, ratios, and direct substitutions are usually faster without graphing.
- The visible window can hide an intercept or intersection. Zoom or use a table.
- A decimal display may not be the exact form the question asks for.
- An intersection is not automatically the requested answer. Re-read the final sentence.
- A slider is useful only after you identify the condition the constant must satisfy.

10-minute setup drill

Prompt	Best first move
Find where two linear equations have the same output.	Graph both and inspect the intersection.
Evaluate $f(2)$, $f(7)$, and $f(12)$.	Define $f(x)$, then enter those inputs in a table.
Find the zeros of a quadratic with awkward coefficients.	Graph the quadratic and read its x-intercepts.
Find a maximum value over $0 < x < 20$.	Graph with the domain restriction and inspect the vertex.
Predict y from several measured data points.	Use a table and the model type requested in the prompt.

Practice next

Open targeted Desmos practice at <https://1600.now/sat-desmos-reference-sheet>

Sources

Desmos keyboard shortcuts: <https://help.desmos.com/hc/en-us/articles/4405966811021-Keyboards-Shortcuts>

College Board calculator policy: <https://satsuite.collegeboard.org/sat/what-to-bring-do/calculator-policy>

Reviewed July 2026. Calculator features and testing policies can change; confirm current policy before test day.