

SAT SUBJECT BREAKDOWN

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READING

A. BREAKDOWN

- a. **52 questions, 65 minutes** (1 min. 15 sec. per question)
- b. **5 passages, 10-11 questions per passage** (13 min. per passage)
- c. 1 **US/World Literature** passage, 1 **Social Studies** passage, 1 **Science-Paired** passage, 1 **US Founding Document/Global Conversation** passage, 1 **Science** passage

B. STRATEGY

- a. **Invest time** to read the passage: it is better to go through the questions somewhat quickly with a good understanding of the passage and ‘where to look’ than reading quickly and having to re-read after each question.
- b. Read **introductions** and titles of all passages; note date and read somewhat slower if in **Old English**.
- c. The reading section is about **what is in the passage**, not literary interpretation or textual analysis. The more ‘steps’ removed you are from the passage (the more you find yourself saying ‘Well, that *could* be interpreted this way...’), the more you should be suspicious of the answer. Take them at their word. They are being **explicit**, and so should you. There is almost always a specific part of the text which has the answer, **except** for overall ‘**tone**’ or ‘**purpose**’ questions.
- d. Try first, when possible, to answer the question **for yourself** before you read the answer options. They are good at designing answer choices that lead you astray. Then confirm that your answer is there (in different wording, of course), and try to **identify the ‘trap’** that they are trying to set with the other answer choices.
- e. Always try to note when the next question asks you to **identify textual evidence** for your current question. You can use the listed options in the textual evidence question to find the relevant part of the text for the current question.

- f. Circle/star questions that you are unsure of along the way, so that any extra time can be used most productively on those questions. (Consider 3-tiered notation: **single** circle for ‘*unsure*,’ **double** for ‘*very unsure*,’ **triple** for ‘*no clue*,’ focusing first on *single circles* with any extra time.)
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WRITING AND LANGUAGE

A. BREAKDOWN

- a. **35 minutes, 44 questions** (48 sec. per question)
- b. **4 passages, 11 questions per passage** (8 min. 45 sec. per passage)

B. LESSON LIST

- a. Four ways to **combine full sentences** (avoid **comma splices**) (period, semicolon, comma + conjunction, colon)
- b. **Subject-verb** agreement/tense & conjugation
- c. **Introductory** words & phrases (punctuation, implication)
- d. **Active vs. passive** voice
- e. Standard English convention (**SEC**)
- f. **Adverbs vs. adjectives**
- g. **Dashes & parentheses**
- h. Word/sentence **order**/passage **organization**
- i. **Consistency** & formatting
- j. **Grammar vs. style**

C. STRATEGY

- a. Circle/star questions that you are unsure of along the way, so that any extra time can be used most productively on those questions. (Consider 3-tiered notation: **single** circle for ‘*unsure*,’ **double** for ‘*very unsure*,’ **triple** for ‘*no clue*,’ focusing first on *single circles* with any extra time.)
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MATH - NO CALCULATOR

A. BREAKDOWN

- a. **20 questions, 25 minutes** (1 min. 15 sec. per question)
- b. **5 free response questions** (#16-20)

B. LESSON LIST

a. ALGEBRA (PRE-, ELEM., INTER.)

- i. **Linear Equations:** $y=mx+b$ (*slope-intercept form*)
 1. **Slope** (3+ definitions)
 2. **Midpoints** (average X's, average Y's)
 3. **Length of line segment** (Pythag. The., *not* distance formula!)
- ii. **Averages:** mean, median, mode
 1. **Average speed** (total distance/total time)
- iii. **Probabilities:** (positive cases)/(total possible cases)
 1. **Compound** (2+ events occurring)
- iv. **Combinations:** *total combinations* = (options in slot 1) x (options in slot 2) x (options in slot 3) ... (Cafeteria example).
- v. **Percentages:** x is (=) 30% (0.30) of (x) 100. (x=30)
 1. **Percent decrease:** (100%-x%) (.85 after 15% discount)
 2. **Percent increase:** (100%+x%) (1.15 after 15% surcharge)
- vi. **Quadratics:** $ax^2+bx+c=0$ (*standard form*), $(x \pm a)(x \pm b)=0$ (*binomial form**) ($x=\pm a, \pm b$) (**solved in binomial form*)
 1. **FOILing:** binomial form \rightarrow standard form
 2. **Factoring:** standard form \rightarrow binomial form (must multiple to C, combine to b)
- vii. **Ratios:** 2 types of problems (easy/hard)
 1. **Easy:** camp is % boys/girls, total of 8 boys, how many girls?
 2. **Hard:** camp is % boys/girls, total of 28 kids, how many boys? Girls?
- viii. **Tools for Solving Equations**
 1. **Exponential rules** (addition, subtraction, multiplication, division; negative exponents; fractional exponents)
 2. **Square roots** (opposite of exponents; convert from fractional exponents to square root notation; simplifying) (third root = 'to the power of one-third')
 3. **Factoring out vs. distributing**
 4. **Identification:** linear (solve for x), quadratic (set = to 0), cubic (solve for x, third root)
 5. **Simplify, simplify, simplify** (even what they give you!)

b. GEOMETRY (COORDINATE, PLANE)

- i. **COORDINATE**
 1. **Length of line segment** (used to calculate areas in coordinate planes)
 2. **Calculating slope** (long & quick ways)
- ii. **PLANE**
 1. **Area of square, rectangle, circle, triangle, parallelogram, trapezoid**
 2. **Volume of cube, rectangular prism, circular prism, triangular prism, trapezoidal prism**
 3. **Circles:** radius, diameter, circumference, arc length, arc degree measure, percentages of circumferences

a. **Equation:** $(x-h)^2+(y-k)^2=r^2$ (center at (h,k), radius=r)

c. **TRIGONOMETRY**

- i. **Special Right Triangles: 30-60-90, 45-45-90**
- ii. **Pythagorean Triples: 3-4-5, 5-12-13, 7-24-25** (+multiples of all! [6-8-10, 10-24-26, 14-48-50])
- iii. **Isosceles (45-45-90) & equilateral (60-60-60) triangles**
- iv. **Sine, cosine, tangent (SOHCAHTOA)** ($\sin[x]/\cos[x]=\tan[x]$)
 1. **Easy:** identifying sines, cosines, tangents from identified triangles
 2. **Hard:** given a particular sine and incomplete side lengths, find cosine or tangent

C. **STRATEGY**

- a. Circle/star questions that you are unsure of along the way, so that any extra time can be used most productively on those questions. (Consider 3-tiered notation: **single** circle for 'unsure,' **double** for 'very unsure,' **triple** for 'no clue,' focusing first on *single circles* with any extra time.)
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MATH - CALCULATOR

A. **BREAKDOWN**

- a. **38 questions, 55 minutes** (1 min. 27 sec. per question)
- b. **8 free response questions** (#31-38)

B. **LESSON LIST** (see above)

C. **STRATEGY**

- a. Circle/star questions that you are unsure of along the way, so that any extra time can be used most productively on those questions. (Consider 3-tiered notation: **single** circle for 'unsure,' **double** for 'very unsure,' **triple** for 'no clue,' focusing first on *single circles* with any extra time.)

TIMING EXERCISES

READING

1 PASSAGE = 10-11 QUESTIONS, 13 MINUTES (1 MIN. 15 SEC./QUESTION)

>**READING:** 3.5-5.5 MIN. (dependent on difficulty)

>**QUESTIONS:** 7.5-9.5 MIN

WRITING & LANGUAGE

1 PASSAGE = 11 QUESTIONS, 8 MIN. 45 SEC. (48 SEC./QUESTION)

MATH - NO CALCULATOR

#1-10 = 10 QUESTIONS, 10 MINUTES (1 MIN./QUESTION)

#11-20 = 10 QUESTIONS, 15 MINUTES (1 MIN. 30 SEC./QUESTION)

MATH - CALCULATOR

#1-10 = 10 QUESTIONS, 11 MINUTES (1 MIN. 6 SEC./QUESTION)****

#11-20 = 10 QUESTIONS, 13 MINUTES (1 MIN. 18 SEC./QUESTION)**

#21 - 30 = 10 QUESTIONS, 15 MINUTES (1 MIN. 30 SEC./QUESTION)*

#31 - 38 = 8 QUESTIONS, 16 MINUTES (2 MIN./QUESTION)***

**(first priority)*

*** (second priority)*

**** (third priority)*

***** (fourth priority)*

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