

SAT/PSAT CHEAT SHEET

READING

GENERAL STRATEGIES

1. Identify key details in question.
2. Read the title.
3. Read a sentence above and below given line numbers.
4. Pick the literal and obvious answer.

SUMMARY QUESTIONS

1. Do them last.
2. Reread hotspots:
 - Title
 - Intro/Concluding Paragraphs
 - Thesis (last sentence of 1st paragraph)
 - Topic Sentences (1st sentence of paragraphs)
3. Review other questions in the passage for clues.

VOCABULARY

1. Forget what you think the word means.
2. Ignore the answer choices.
3. Make up your own definition for the word in context.
4. Read a sentence above and below the line.
5. Plug in the answer choices.

EVIDENCE-BASED QUESTIONS

1. Choose the line number that matches key details in previous question.
2. Choose answer in previous question that matches line number.

DATA QUESTIONS

1. Look at the key spots:
 - Title of the Graph or Table
 - Columns/Rows
 - X and Y Axes
 - Legend/Key
 - Source
2. No assumptions: the answer is in the data.

PASSAGE QUESTIONS

1. Do 1 passage at a time.
2. Make a quick mental summary of each passage
3. Usually, the authors disagree.

WRITING

GRAMMAR QUESTIONS

1. Choose the shortest answer.
 - Deleting is always the shortest answer.
 - Shortest in number of words, not number of letters
 - This includes punctuation
2. Look at how the answers are different.
3. Similar answers are probably wrong.
4. Keep related words together.
5. Keep the same style as the rest of the sentence or paragraph:
 - Tense
 - Tone
 - Number
6. Identify the main noun and main verb in the sentence.
7. Choose the most boring answer

TRANSITIONS

1. Read the sentence before and after the sentence, and pick the one that best matches the relationship.
2. Transitions are options: delete if given the option.
3. Transitions cannot combine sentences with a comma; therefore, they usually come after a semicolon or period.

BEST COMBINES UNDERLINED SENTENCES

1. Shortest answer
2. Least repetitive
3. Keeps the same structure
4. Doesn't change the meaning

MOVING/ADDING/DELETING SENTENCES

1. Read in the right place (this sentence, following sentence, Sentence 5).
2. Read the sentences before and after.
3. Do not worry about length.
4. The answer is almost never "undermines."
5. If one part of the answer is wrong, the whole answer is wrong.

REPLACING SENTENCES

1. Match the key details in the sentence.
2. Read in the right place (this sentence, following sentence, preceding sentence, etc...)
3. Match the sentence before and after.
4. Most specific answer is usually correct.

MATH

GENERAL STRATEGIES

1. Use formula sheet.
2. Use the answer choices as clues.
3. Read the question 2 times.
4. Underline the last sentence.
5. Use your calculator

ALGEBRA

1. Get to one variable.
2. Do the opposite.
3. For systems of equations: eliminate or substitute.

GEOMETRY

1. Make right angles and use the Pythagorean theorem.
2. Find a radius.
3. Fill in angle measures.
4. Distance Formula = Pythagorean Theorem = Circle Equation

STATISTICS

1. All surveys are biased and flawed.
2. Avoid extreme answers.

LINEAR ALGEBRA

Slope-Intercept Form $y = mx + b$
 $m = \text{slope}$
 $b = y\text{-int}$

Slope Formula $m = \frac{(y_2 - y_1)}{(x_2 - x_1)}$

Midpoint Formula $\left(\frac{(x_1 + x_2)}{2}, \frac{(y_1 + y_2)}{2} \right)$

Distance Formula $d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$

PARABOLAS

Standard Form $y = ax^2 + bx + c$

Vertex Standard Form $\text{vertex} = \frac{-b}{2a}$

Vertex Form $y = a(x - h)^2 + k$
 $\text{vertex} = (h, k)$

Quadratic Equation $x\text{-int} = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$

GEOMETRY

Radians $\text{Radians} = \text{Degrees} \times \left(\frac{\pi}{180} \right)$

Arc Length $\text{Arc Length} = \text{Radius} \times \text{Radians}$

Degrees $\text{Degrees} = \text{Radians} \times \left(\frac{180}{\pi} \right)$

Circle Equation $(x - h)^2 + (y - k)^2 = r^2$

Degrees in a Polygon $(n - 2) \times 180$
 $n = \text{number of sides.}$

TRIGONOMETRY

Sine/Cosine Relationship

$$\sin(x^\circ) = \cos(90 - x^\circ)$$
$$\cos(x^\circ) = \sin(90 - x^\circ)$$

SOHCAHTOA

$$\sin = \frac{\text{opp}}{\text{hyp}} \quad \tan = \frac{\text{opp}}{\text{adj}}$$
$$\cos = \frac{\text{adj}}{\text{hyp}}$$

STATISTICS

Percentage Change

$$\text{Percentage Change} = \left(\frac{\text{New} - \text{Old}}{\text{Old}} \right)$$

SCIENCE

$$\text{Speed} = \frac{\text{Distance}}{\text{Time}} \quad \text{Density} = \frac{\text{Mass}}{\text{Volume}}$$