



Most Missed/Omitted Items on the Fall 2003 PSAT



Office of Research and Evaluation

PSAT

Areas Tested



■ Verbal

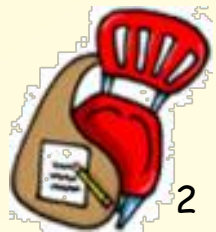
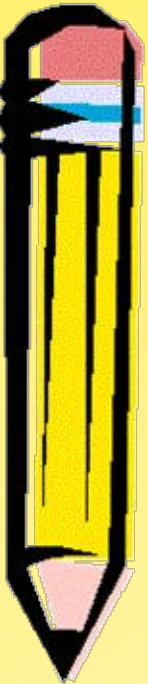
- Sentence completion, analogies, critical reading (vocabulary, comprehension, reasoning)

■ Math

- Standard multiple-choice, quantitative comparisons, student-produced responses
- Algebra, arithmetic, geometry

■ Writing

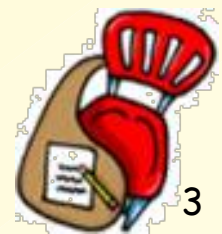
- Identifying sentence errors, improving sentences and paragraphs



PSAT Analysis




- Item analysis by grade (7-11) for 5,911 students
- Students included only in areas where student received score
- Mean correct responses by grade
- Individual school item analysis by grade
- 10th grade information basis for PowerPoint presentation



Mean Correct Responses



- 
- Verbal: All sections
 - 17.7 correct of 52 items (34%)
 - Mathematics: All sections
 - 13.7 correct of 40 items (34%)
 - Writing: All sections
 - 11.9 correct of 39 items (31%)



Verbal Sections

Mean Correct Responses



■ Section 1

- Sentence completion (1.5/5; 30%)
- Analogies (2.8/6; 47%)
- Critical reading (4.2/14; 30%)

■ Section 3

- Sentence completion (2.8/8; 35%)
- Analogies (3.1/7; 44%)
- Critical reading (3.3/12; 28%)



Math Sections

Mean Correct Responses

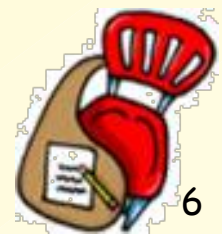


■ Section 2

- Standard multiple choice (7.4/20; 37%)

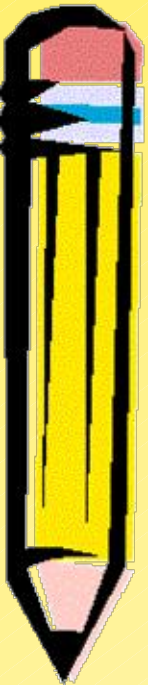
■ Section 4

- Quantitative comparisons (4.8/12; 40%)
- Student produced responses (1.5/8; 19%)



Math Content

Mean Correct Responses



Algebra

5.6 correct of 17 items (33%)

Arithmetic

5.6 correct of 13 items (43%)

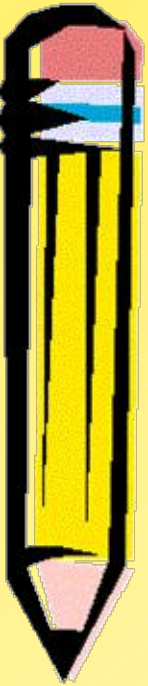
Geometry

2.4 correct of 10 items (24%)



Writing Section

Mean Correct Responses



■ Section 5

■ Identifying sentence errors
(4.9/19; 26%)

■ Improving sentences
(5.1/14; 36%)

■ Improving paragraphs
(1.8/6; 30%)



Fall 2003 PSAT Administration



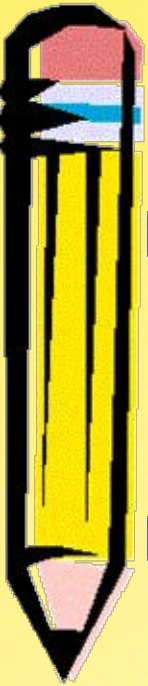
Grade	Number Tested			
	Verbal	Math	Writing	Total
7	260	260	259	260
8	708	707	706	708
9	2246	2236	2183	2246
10	1547	1546	1527	1547
11	1148	1145	1127	1150



Verbal Items



- The following slides show selected items that were not answered correctly most often (missed or omitted by at least 80% of 10th grade students).
- For each item and based on 10th grade performance, percent and number responding to each answer choice are included in parentheses.
- Although only grade 10 performance is fully reported here, note that these items were difficult for students in the other grades as well.
- Correct answers are bold, red and underlined.



Verbal Correct Response Rates



Grade	Item 5	Item 11	Item 14	Item 32	Item 33	Item 40
7	12%	15%	16%	9%	7%	5%
8	15%	12%	14%	12%	6%	8%
9	13%	14%	12%	15%	10%	11%
10	14%	12%	14%	13%	8%	10%
11	18%	17%	14%	15%	11%	13%





5. The company spokesperson was _____, flippantly _____ complaints about the noise generated by the company's new plant.

- (A) cavalier . . dismissing (220, 14%)
- (B) adroit . . inculcating (121, 8%)
- (C) prescient . . validating (218, 14%)
- (D) resolute . . avoiding (448, 29%)
- (E) defensive . . soliciting (367, 24%)

OMITTED (173, 11%)





11. EXONERATE : BLAME ::

- (A) cure : disease (190, 12%)
- (B) allege : proof (284, 18%)
- (C) promise : betrayal (356, 23%)
- (D) liberate : freedom (339, 22%)
- (E) compete : victory (95, 6%)

OMITTED (283, 18%)





...

These "atom smashers" are among the largest, most powerful machines ever built by the human race that are not intended for the purpose of generating power, like the dams and nuclear reactors, or for predicting the weather or simulating nuclear explosions, like the supercomputers. Their sole purpose is intellectual: to find the faintest glimmers of evidence that, despite so many appearances to the contrary, we live in a mathematically symmetrical universe.

...





14. The passage as a whole suggests that, for twentieth-century society, finding "the faintest glimmers of evidence" (line 31) is

- (A) an inadequate payoff for such a difficult undertaking (156, 10%)
- (B) an expensive and ultimately futile ambition (174, 11%)
- (C) an unremarkable but necessary step in a long process (276, 18%)
- (D) an example of the kind of small discovery that inevitably leads to a scientific breakthrough (548, 35%)
- (E) an elusive yet compelling goal (209, 14%)

OMITTED (184, 12%)





32. Many human inventions were derived from nature: early airplane designers, for example, _____ features of bird morphology.

- (A) compensated (271, 18%)
- (B) appropriated (197, 13%)
- (C) substituted (364, 24%)
- (D) extricated (384, 25%)
- (E) anticipated (199, 13%)

OMITTED (132, 9%)





33. Although _____ of electronic mail tout its ease of use, staunch letter writers counter that such facility is not necessarily a _____.

- (A) advocates .. detriment (282, 18%)
- (B) adversaries .. consideration (293, 19%)
- (C) denouncers .. benefit (533, 34%)
- (D) proponents .. boon (124, 8%)
- (E) champions .. risk (132, 9%)

OMITTED (183, 12%)





40. DIGRESS : ARGUMENT ::

- (A) deviate : standard (148, 10%)
- (B) arrive : destination (241, 16%)
- (C) depart : exit (351, 23%)
- (D) associate : affiliation (295, 19%)
- (E) revise : essay (177, 11%)

OMITTED (335, 22%)



Math Items



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- Correct answers are bold, red and underlined.



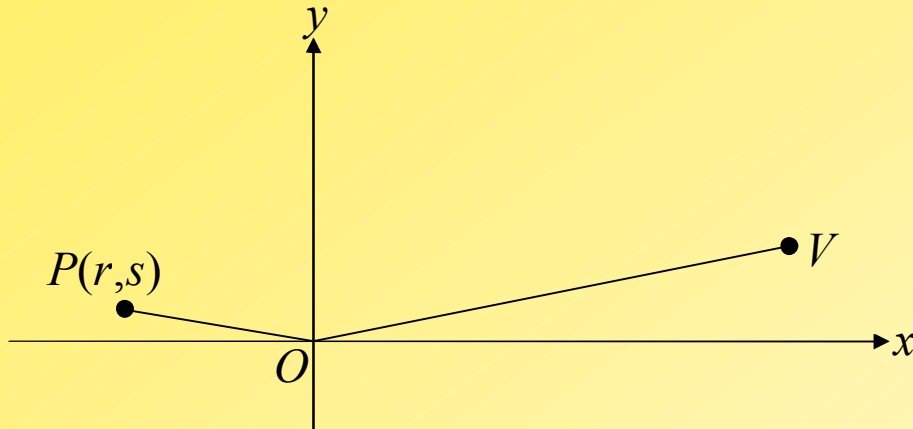
Math

Correct Response Rates



Grade	Item 15	Item 17	Item 18	Item 19	Item 20	Item 31
7	14%	22%	7%	12%	9%	15%
8	16%	18%	11%	8%	8%	13%
9	15%	15%	12%	10%	12%	17%
10	16%	17%	12%	10%	11%	16%
11	17%	19%	16%	13%	11%	15%





15. In the figure above, the slope of line segment OP is $-m$, and the slope of line segment OV is m . If the length of OV is twice the length of OP , what are the coordinates of point V ? (*Geometry*)

- (A) $(-r, -s)$ (130, 8%)
- (B) $(-2r, s)$ (186, 12%)
- (C) $(-2r, -2s)$ (272, 18%)
- (D) $(-2r, 2s)$ (246, 16%)
- (E) $(2r, 2s)$ (442, 29%)

OMITTED (270, 17%)





17. The average (arithmetic mean) of five positive integers is 12. Which of the following could be one of the five integers? (*Arithmetic*)

- I. 43
- II. 59
- III. 61

- (A) I only (260, 17%)
- (B) II only (187, 12%)
- (C) III only (315, 20%)
- (D) I and II only (198, 13%)
- (E) I, II, and III (187, 12%)

OMITTED (399, 26%)





18. If k is a positive constant and $(x + k)(x - 2k) = 0$, what is the sum of the different possible values of x in terms of k ? (*Algebra*)



- (A) $-3k$ (182, 12%)
- (B) $-k$ (244, 16%)
- (C) 0 (340, 22%)
- (D) k (192, 12%)
- (E) $3k$ (134, 9%)

OMITTED (454, 29%)



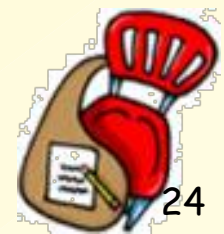


19. If x is positive, let $\triangle x$ be defined as $x + 3$, and if x is not positive, let $\triangle x$ be defined as $-x - 3$. What is the value of $\triangle 5 - \triangle -5$? (*Algebra*)



- (A) 0 (279, 18%)
- (B) 6 (157, 10%)
- (C) 8 (96, 6%)
- (D) 10 (655, 42%)
- (E) 16 (108, 7%)

OMITTED (251, 16%)





20. Right circular cylinders A and B have the same volume. The radius of cylinder A is twice the radius of cylinder B . What is the ratio of the height of cylinder A to the height of cylinder B ? (*Geometry*)



- (A) 1 to 4 (173, 11%)
- (B) 1 to 2 (349, 23%)
- (C) 1 to 1 (153, 10%)
- (D) 2 to 1 (392, 25%)
- (E) 4 to 1 (97, 6%)

OMITTED (382, 25%)





31. Fran purchased y items at a store and paid 2 dollars each for 5 of the items and 10 dollars each for the remaining items. (*Algebra*)

Column A

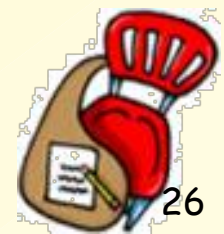
The total amount Fran paid for the y items

Column B

$(10y - 40)$ dollars

- (A) Quantity in Column A is greater (363, 23%)
(B) Quantity in Column B is greater (311, 20%)
(C) Two quantities are equal (241, 16%)
(D) Relationship cannot be determined from the information given (416, 27%)

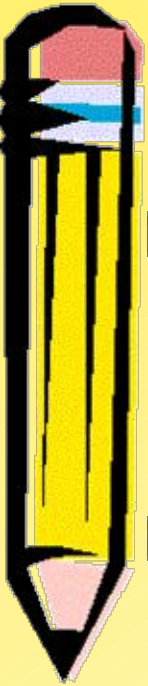
OMITTED (215, 14%)



Writing Items



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Writing

Correct Response Rates



Grade	Item 9	Item 11	Item 16	Item 17	Item 19	Item 33
7	12%	12%	12%	6%	7%	19%
8	11%	13%	15%	7%	8%	17%
9	12%	10%	15%	10%	10%	16%
10	12%	12%	15%	9%	7%	17%
11	15%	14%	19%	9%	7%	21%





9. Uranium-thorium analysis joins carbon 14 dating as methods that scientists can use ^A ^B to determine the age of archaeological ^C ^D finds. No error ^E

- (A) (181, 12%)
- (B) (129, 8%)
- (C) (68, 4%)
- (D) (74, 5%)
- (E) (1016, 67%)

OMITTED (59, 4%)





11. By 1900, Queen Victoria ruled England
A
for over sixty years, long enough for her
B C
to have left an indelible stamp on the
D
attitudes of her subjects. No error
E

- (A) (183, 12%)
- (B) (82, 5%)
- (C) (105, 7%)
- (D) (394, 26%)
- (E) (702, 46%)

OMITTED (61, 4%)





16. Along Berkshire County's western border
A
runs the Taconic Mountains, to the east lie
B C
the Hoosacs, and straddling the Vermont
D
border are the Green Mountains. No error
E

- (A) (94, 6%)
- (B) (235, 15%)
- (C) (224, 15%)
- (D) (288, 19%)
- (E) (590, 39%)

OMITTED (96, 6%)





17. So confident was the debater that her
A
position was both meritorious and defensive
B
that she neglected to present adequate
C
evidence to support her arguments. No error
D E

- (A) (701, 46%)
- (B) (144, 9%)
- (C) (106, 7%)
- (D) (59, 4%)
- (E) (423, 28%)

OMITTED (94, 6%)





19. The historic San Diego Zoo features more
A
animal species than any other city in the
B
country; some of them can be seen in
C
captivity nowhere else. No error
D E

- (A) (96, 6%)
- (B) (112, 7%)
- (C) (142, 9%)
- (D) (676, 44%)
- (E) (403, 26%)

OMITTED (98, 6%)





33. In the nineteenth century, the German emphasis on the study of military history helped it to win important victories.

- (A) the German emphasis on the study of military history helped it to win (221, 14%)
- (B) by emphasizing the study of military history, this helped Germany to win (325, 21%)
- (C) German emphasis on the study of military history helped them to win (377, 25%)
- (D) an emphasis on the study of military history helped to Germany's winning (122, 8%)
- (E) an emphasis on the study of military history helped Germany to win (252, 17%)

OMITTED (230, 15%)

