PSSA Mathematics Test Design

The PSSA Mathematics test plan shown in the following table is organized by grade and broken down between multiple-choice (MC) and open-ended (OE) items. Core items are also distinguished from items that serve the role of Psychometric Use and field test (FT). The following tables summarize the Mathematics test design.

Standard Operational Mathematics High-Level Test Plan per Form from 2018 Onward

Grade	Multiple-Choice (MC)			Open-Ended (OE)			Total Core Items	Total Core Points
	Core	Psychometric Use*	Embedded Field Test	Core	Psychometric Use*	Embedded Field Test		
3	40	2	6	3	0	1	40 MC 3 OE	52
4	40	2	6	3	0	1	40 MC 3 OE	52
5	40	2	6	3	0	1	40 MC 3 OE	52
6	40	2	6	3	0	1	40 MC 3 OE	52
7	40	2	6	3	0	1	40 MC 3 OE	52
8	40	2	6	3	0	1	40 MC 3 OE	52

* Psychometric Use is generally for equating purposes. Not all equating items will be unique on all forms [up to 18 unique MC items across all forms].

Mathematics PSSA Test Content Blueprints

The content blueprints for the PCS-based Mathematics assessment are shown in the following tables. The blueprint is organized around four thematic Reporting Clusters (Numbers and Operations, Algebraic Concepts, Geometry, and Data Analysis and Probability) based on the expressed emphasis contained within the PCS. Each cluster is broken down into Reporting Categories that are associated with specific grades or grade-spans. The corresponding Reporting Categories are as follows (grade associations are shown in parentheses):

- A = Numbers and Operations
  - A-T = Numbers and Operations in Base Ten (Grades 3–5)
  - A-F = Numbers and Operations – Fractions (Grades 3–5)
  - A-N = The Number System (Grades 6–8)
  - A-R = Ratios and Proportional Relationships (Grades 6, 7)
- B = Algebraic Concepts
  - B-O = Operations and Algebraic Thinking (Grades 3–5)
  - B-E = Expressions and Equations (Grades 6–8)
  - B-F = Functions (Grade 8)
- C = Geometry
  - C-G = Geometry (Grades 3–8)
- D = Data Analysis and Probability
  - D-M = Measurement and Data (Grades 3–5)
  - D-S = Statistics and Probability (Grades 6–8)

The PSSA Mathematics blueprints are provided in the following two tables.

PCS-based PSSA Mathematics Blueprint: Percent of the Core by Reporting Category by Grade

Reporting Category	Grade			Reporting Category	Grade		Reporting Category	Grade
	3	4	5		6	7		8
A-T	14–17%	18–22%	24–28%	A-N	18–22%	14–17%	A-N	14–17%
A-F	14–17%	20–25%	26–30%	A-R	17–21%	24–28%	B-E	30–35%
B-0	26–32%	24–28%	14–17%	B-E	26–30%	24–28%	B-F	20–25%
C-G	14–17%	14–17%	14–17%	C-G	14–17%	18–22%	C-G	17–21%
D-M	26–32%	17–21%	17–21%	D-S	18–22%	14–17%	D-S	14–17%
Total	100%	100%	100%	Total	100%	100%	Total	100%

PCS-based PSSA Mathematics Blueprint: Points by Reporting Category by Grade

Reporting Category	Grade			Reporting Category	Grade		Reporting Category	Grade
	3	4	5		6	7		8
A-T	7-9 pts	9-11 pts	12-15 pts	A-N	9-11 pts	7-9 pts	A-N	7-9 pts
A-F	7-9 pts	10-13 pts	14-16 pts	A-R	9-11 pts	12-15 pts	B-E	16-18 pts
B-0	14-17 pts	12-15 pts	7-9 pts	B-E	14-16 pts	12-15 pts	B-F	10-13 pts
C-G	7-9 pts	7-9 pts	7-9 pts	C-G	7-9 pts	9-11 pts	C-G	9-11 pts
D-M	14-17 pts	9-11 pts	9-11 pts	D-S	9-11 pts	7-9 pts	D-S	7-9 pts
Total Core	52 pts	52 pts	52 pts	Total	52 pts	52 pts	Total	52 pts

Mathematics Test Development Design

At all grades, the PCS-Mathematics core can be described as:

40 core MC items		40 points
3 core 4 pt OE items		12 points
	Total	52 points

As shown in the operational layout table below, the PSSA Mathematics test will have two (2) sections starting in 2018.

Mathematics Operational Section Layout Plan for Grades 3 through 8

Section	Content Emphasis	Number of MC	Number of OE	Estimated Section Testing Time (in minutes)
1	Mathematics	24	2	78
2	Mathematics	24	2	78