6 District of Columbia DC CAPE Math Practice x Tests for Grade 8 Students

- Practice Smart. Score Higher.
- Learn Today, Excel Tomorrow!
- Conquer the DC CAPE with Confidence!

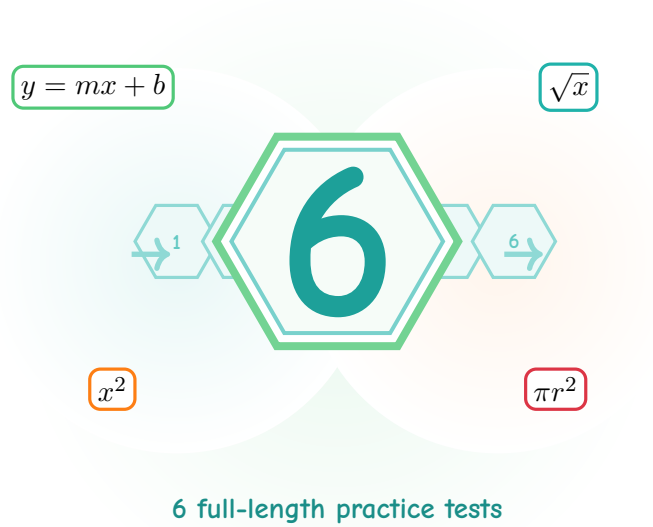


Practice Master Achieve

Reza Nazari

6 District of Columbia DC CAPE Math Practice Tests for Grade 8 Students

A Complete Guide to Building Math Mastery and Excelling on the District of Columbia DC CAPE Test



6 full-length practice tests

Reza Nazari

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The Two-Minute Rule

If you have been working on a single item for two minutes without clear progress, mark it with a light pencil dot, skip it, and continue to the next question. After you have completed every item you can, return to the marked ones with fresh perspective. Many students find that the answer comes more easily on the second pass.

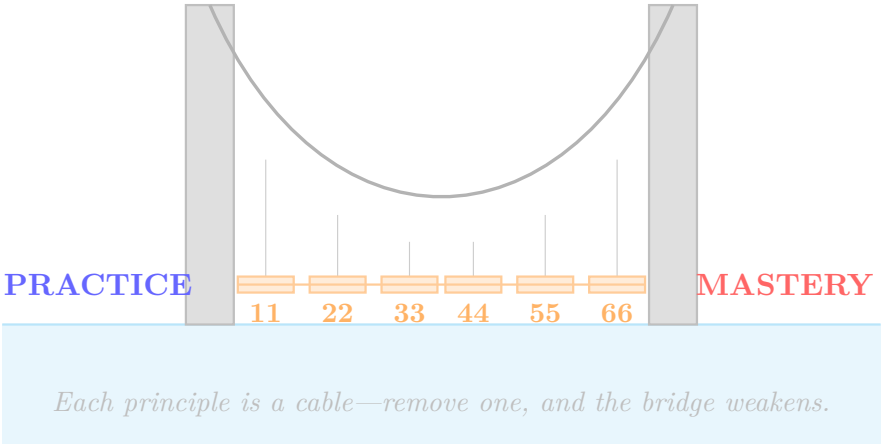


Read carefully
Scan for a tip

Scan Me

Build an Unshakable Mindset

Six Principles That Turn Practice into Mastery



The Power of "Not Yet"

Research in cognitive science confirms that the brain forms stronger connections when it struggles with a problem than when it breezes through one. Saying "I do not understand this *yet*" is not just a feel-good phrase—it is a scientifically accurate description of what your brain is doing: building the pathways it needs to understand it soon.

The Six Cables of a Strong Math Mindset

1. **Expect the Struggle:** Hard problems are not a sign that something is wrong—they are the entire point of practice. If every question felt easy, you would not be growing. Difficulty is the signal that learning is happening.

2. **Treat Errors as Evidence:** Every wrong answer carries a specific lesson. When you review a mistake, ask: *Did I misread the question? Apply the wrong formula? Make an arithmetic slip?* The answer to that question tells you exactly what to study next.

3. **Value Process Over Speed:** Rushing through problems trains you to be fast but inaccurate. Deliberate, step-by-step work trains you to be both accurate *and* fast, because good habits naturally become quicker with repetition.

4. **Use Practice Tests as Dress Rehearsals:** Actors do not walk on stage without rehearsing, and you should not walk into the DC CAPE without simulating it. Time yourself, use only the tools you will have on exam day, and create the most realistic conditions you can.

5. **Control What You Can Control:** You cannot control the difficulty of the test, the noise in the room, or what your classmates are doing. You *can* control your preparation, your focus, and your attitude. Channel all of your energy into those three things.

6. **Celebrate Progress, Not Perfection:** If you scored 60% on Test 1 and 72% on Test 3, that twelve-point jump is a genuine achievement. Growth matters more than any single score. Keep a record of your results and watch the upward trend emerge.

"A bridge is not built in a single day—it is built one cable, one plank, one connection at a time."

Table of Contents

★ Practice Test 1 ____ 18
★ Practice Test 2 ____ 38
★ Practice Test 3 ____ 59
★ Practice Test 4 ____ 78
★ Practice Test 5 ____ 95
★ Practice Test 6 ____ 115
Practice Test Answer Keys ____ 135
Practice Test Answers and Explanations ____ 139

Grade 8 Math

Grade 8 Mathematics

1

Questions: 40 **Duration:** No time limit

Calculator Policy: You may use a basic calculator.

Important Test Information

Question Types:

- **Multiple Choice:** Choose the best answer from the four options (A, B, C, or D).
- **Open-Ended:** Write your complete answer in the space provided.
- **Select All That Apply:** Choose all answers that correctly answer the question.

Test-Taking Tips:

- Read each question carefully before answering.
- Check your answers before moving on.
- Use the formula sheet as needed.

Remember: Take your time, stay calm, and do your best. You've prepared well for this test—you've got this!

Grade 8 Mathematics Reference Materials

LINEAR EQUATIONS

Slope-intercept form	$y = mx + b$
Direct variation	$y = kx$
Slope of a line	$m = \frac{y_2 - y_1}{x_2 - x_1}$

CIRCUMFERENCE

Circle	$C = 2\pi r$ or $C = \pi d$

AREA

Triangle	$A = \frac{1}{2}bh$
Rectangle or parallelogram	$A = bh$
Trapezoid	$A = \frac{1}{2}(b_1 + b_2)h$
Circle	$A = \pi r^2$

SURFACE AREA

	Lateral	Total
Prism	$S = Ph$	$S = Ph + 2B$
Cylinder	$S = 2\pi rh$	$S = 2\pi rh + 2\pi r^2$

VOLUME

Prism or cylinder	$V = Bh$ (where B is area of base)
Pyramid or cone	$V = \frac{1}{3}Bh$ (where B is area of base)
Sphere	$V = \frac{4}{3}\pi r^3$

ADDITIONAL INFORMATION

Pythagorean theorem	$a^2 + b^2 = c^2$
Simple interest	$I = Prt$
Compound interest	$A = P(1 + r)^t$