

The logo for Next Step Test Prep is centered in a blue square. The words "Next" and "Step" are stacked vertically in a large, white, sans-serif font. Below them, the words "TEST PREP" are written in a smaller, white, all-caps, sans-serif font. The background of the slide is dark blue with a repeating pattern of small white plus signs. A large white arrow points downwards from the top of the slide, framing the logo.

**Next
Step**
TEST PREP

PCAT WEBINAR

Logs, units, and graphs!

Today's Agenda

- ▶ **Welcome to this Info Session!**
- ▶ **Introduction**
- ▶ **Logarithms**
- ▶ **Units and graphs**
- ▶ **Questions?**

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Who Is Next Step?

- Began in 2009 as a tutoring company
- Focus on graduate admissions tests only
- Team of educational experts
- First company to have materials built from ground up for 2016 PCAT format

✓ **We never stop improving our materials!**

Next
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STUDENTS HAVE A CHOICE

Introduction

Next
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Hi, I'm Phil!

- ▶ PCAT Content writer
 - ▶ Tutored and taught for 9+ years
 - ▶ Attended University of Nebraska Medical Center as an MD/PhD student.
- ✓ **Next Step is a team of test prep and educational experts committed to excellence.**



Logarithms

What is a log?

$$x-2=y \quad x=y+2$$

It's just a way to rewrite an exponential equation!

$$x/4 = y \quad x=4y \quad \rightarrow$$

$$\log_{10} x = y \quad x=10^y \quad \rightarrow$$

Logarithms

$$\log_2 8 = ?$$

$$\log_2 A = B$$

$$A = 2^B$$

$$A = 8$$

$$8 = 2^B$$

$$8 = 2 \times 2 \times 2$$

$$8 = 2^3$$

$$\log_2 A = B$$

$$A = 2^B$$

Logarithms

$$(x^{12} (x^y) / x^{16})^{-2}$$

$$(x^{12+y} / x^{16})^{-2}$$

$$(x^{12+y-6})^{-2}$$

$$(x^{y-4})^{-2}$$

$$1 / (x^{y-4})^2$$

$$1 / x^{12} y^{-8}$$

Exponential Laws

$$x^a \cdot x^b = x^{a+b}$$

$$\frac{x^a}{x^b} = x^{a-b}$$

$$(x^a)^b = x^{ab}$$

$$x^{-a} = \frac{1}{x^a}$$

$$x^0 = 1$$

Logarithms

Exponential Laws

$$x^a \cdot x^b = x^{a+b}$$

$$\frac{x^a}{x^b} = x^{a-b}$$

$$(x^a)^b = x^{ab}$$

$$x^{-a} = \frac{1}{x^a}$$

$$x^0 = 1$$

Logarithm Laws

$$\log(ab) = \log(a) + \log(b)$$

$$\log\left(\frac{a}{b}\right) = \log(a) - \log(b)$$

$$\log(a^b) = b \cdot \log(a)$$

$$\log_x\left(\frac{1}{x^a}\right) = -a$$

$$\log_x 1 = 0$$

Logarithms

Solve $\log_{\downarrow 2} (4x)^{\uparrow 3} - \log_{\downarrow 2} x$.

$$\log_{\downarrow 2} (4x)^{\uparrow 3} - \log_{\downarrow 2} x$$

$$= 3 \log_{\downarrow 2} 4x - \log_{\downarrow 2} x$$

$$= (3 \log_{\downarrow 2} 4) + (3 \log_{\downarrow 2} x) - \log_{\downarrow 2} x$$

$$= 3(2) + 2 \log_{\downarrow 2} x$$

$$= 6 + 2 \log_{\downarrow 2} x$$

Logarithm Laws

$$\log(ab) = \log(a) + \log(b)$$

$$\log\left(\frac{a}{b}\right) = \log(a) - \log(b)$$

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$$\log_x\left(\frac{1}{x^a}\right) = -a$$

$$\log_x 1 = 0$$

Logarithms

Solve $4 = \log(100x)^2 - \log(100)$

$$4 = 2 \log(100x) - \log 100$$

$$4 = 2 \log(100) + 2 \log(x) - \log 100$$

$$4 = 4 + 2 \log(x) - 2$$

$$0 = 2 + 2 \log x$$

$$-2 = 2 \log x$$

$$-1 = \log x$$

$$1 = \log x$$

Logarithm Laws

$$\log(ab) = \log(a) + \log(b)$$

$$\log\left(\frac{a}{b}\right) = \log(a) - \log(b)$$

$$\log(a^b) = b \cdot \log(a)$$

$$\log_x\left(\frac{1}{x^a}\right) = -a$$

$$\log_x 1 = 0$$

Logarithms

Solve $10^{\log 12} = x/3$

Logarithm Laws

$$\log(ab) = \log(a) + \log(b)$$

$$\log\left(\frac{a}{b}\right) = \log(a) - \log(b)$$

$$\log(a^b) = b \cdot \log(a)$$

$$\log_x\left(\frac{1}{x^a}\right) = -a$$

$$\log_x 1 = 0$$

Data Interpretation

P-value

Likelihood that the null hypothesis could be true

Standard Deviation

How much the values are grouped around the mean

R-squared (R^2)

How correlated 2 items are.

Data Interpretation

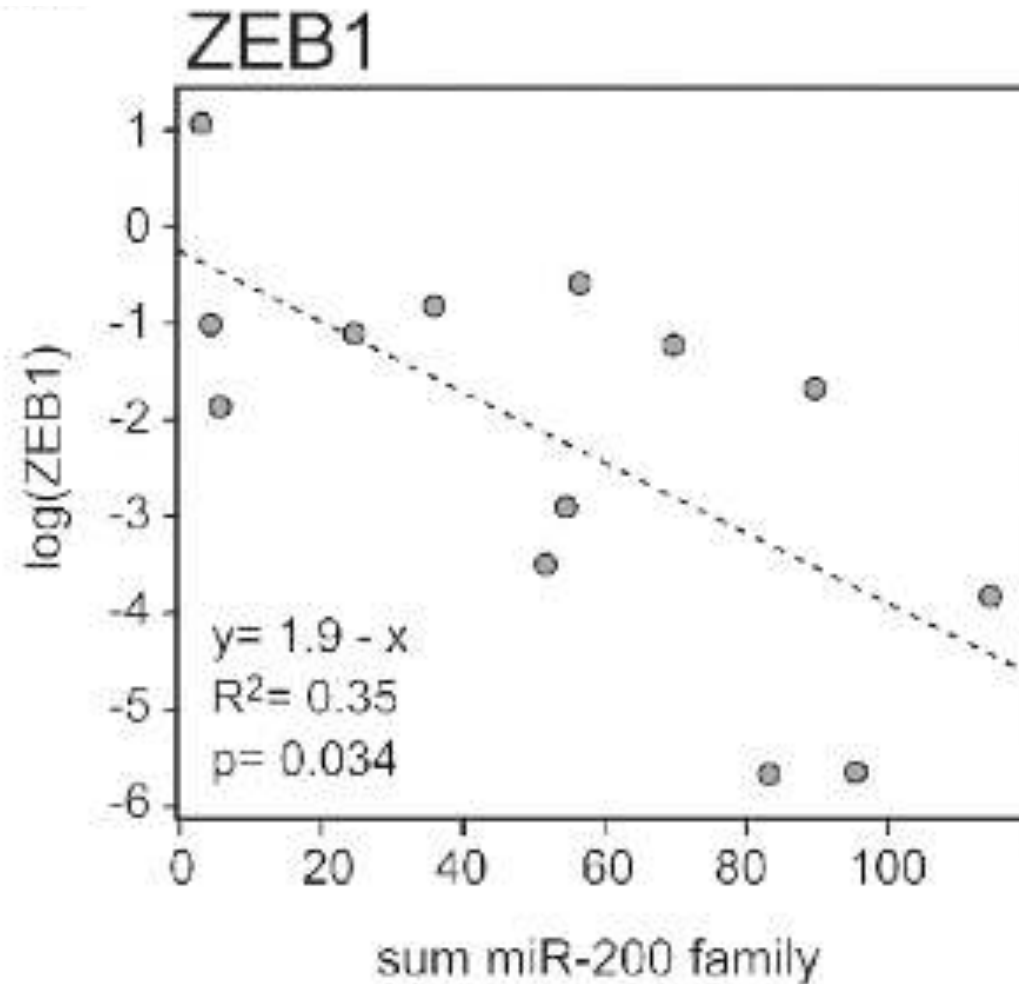
Pearson correlation coefficient	Number of joint attention behaviors	Number of scaffolding behaviors	Number of unique words used
Number of joint attention behaviors	1.00	.78 (p=.039)	.89 (p<.0001)
Number of scaffolding behaviors	.78 (p=.039)	1.00	.74 (p=.023)
Number of unique words used	.89 (p<.0001)	.74 (p=.023)	1.00

Data Interpretation

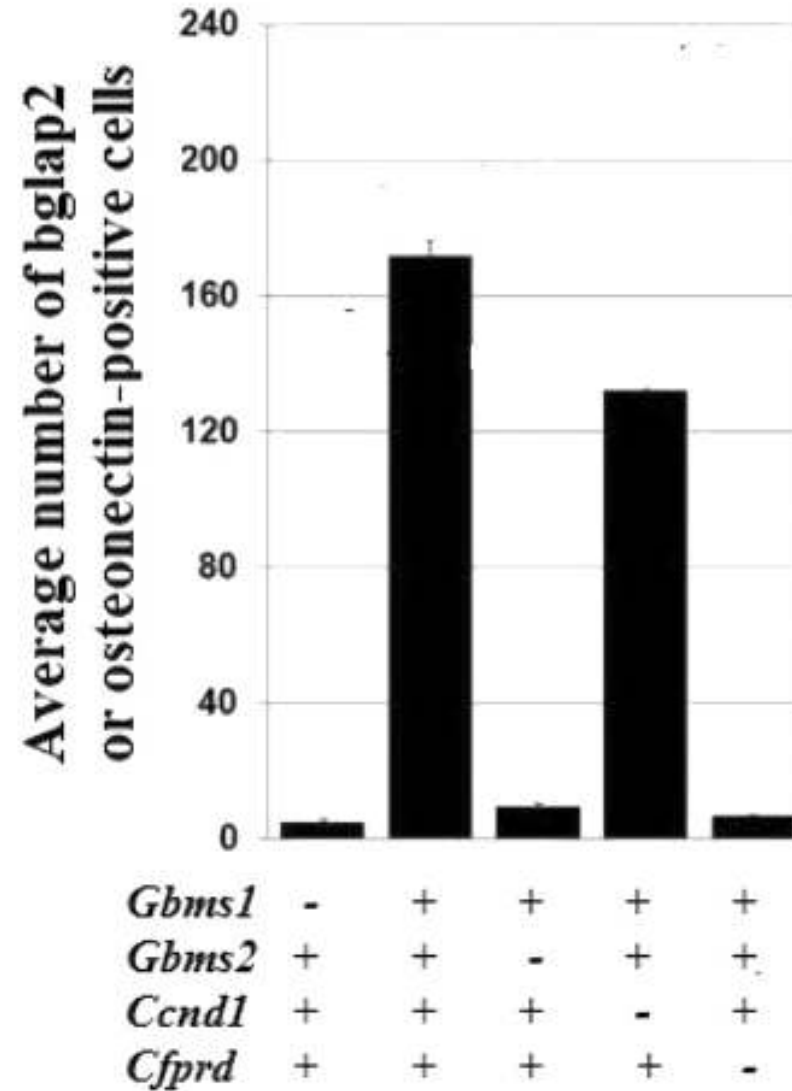
Brain Area	Children exposed to stressful situations	Control (n=40)	p-value
Intracranial Volume	1245	1253	0.38
Hippocampus	5.08	7.1	0.0002

Data Interpretation

When I have 100 miR200, how much zeb1 can I expect?



Data Interpretation



Next Step: Core Values

Next
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TEST PREP



Educate Daily



Approachability



Authenticity



Professionalism



Ownership

We are dedicated to providing personalized support, advice and prep options that match each student's individual needs.

Students Have a Choice

Next
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TEST PREP

✓ **Over 50,000 students have used Next Step Test Prep in their prep journey**

- Always up-to-date content, strategy and tests
- Guaranteed Satisfaction
- No call center – instead, Academic Managers guide you all the way!
- Always updating our content based on announced changes and student feedback
- Are ensured the most up-to-date, realistic experience... always
- Access to Online Forum for additional live support from fellow students and NSTP Content Team

SHOPPER
APPROVED

4.7



Personalized Options

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✓ No matter your study style, subject expertise, or PCAT goal, Next Step has an option for your personal needs and lifestyle.

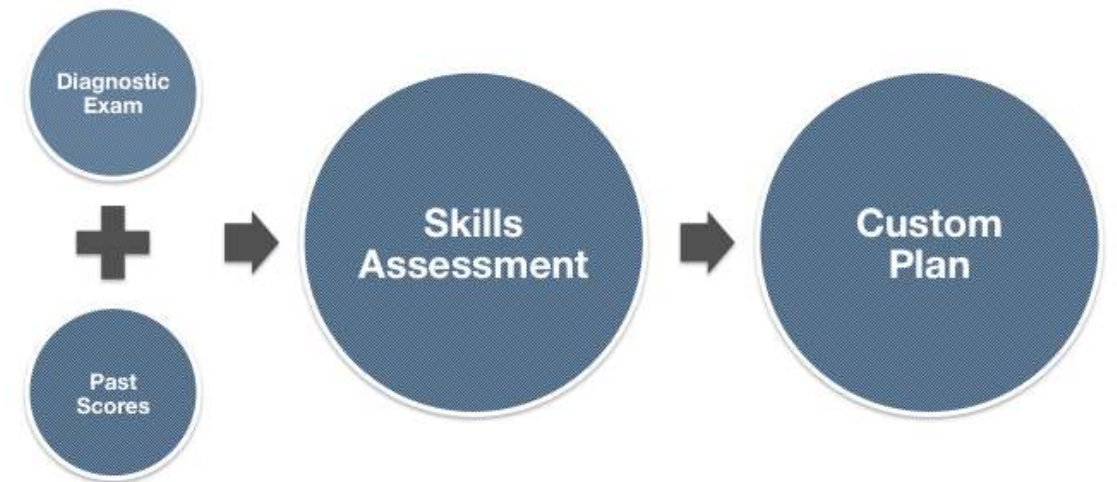
- Free Practice Bundle Materials
- Self-Prep Materials and Planning
- Guided Online Study with Free Extra Help
- One-on-One Tutoring



One-On-One Tutoring

- ✓ No matter your study style, subject expertise, or PCAT goal, Next Step's Tutoring is personalized for YOU
- Tailored Study Plan
- Flexible Online Tutor Sessions
- Top-Scoring, Expert PCAT Tutors

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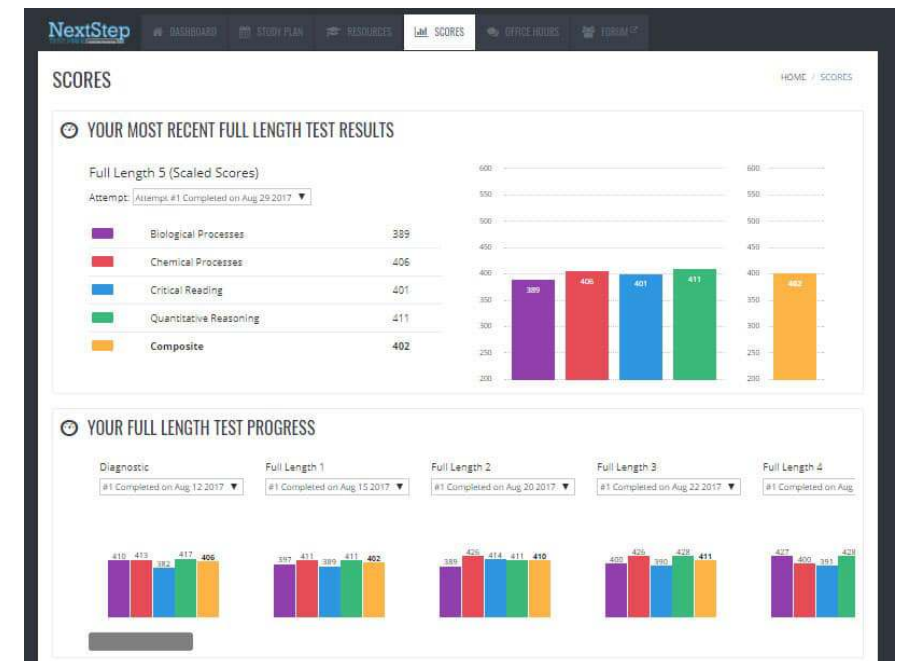


Unmatched Online Course

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✓ **Finally, a high-quality PCAT prep choice delivering personalization, flexibility, and affordability in an easy-to-understand platform and a score guarantee.**

- **One-On-One Orientation**
- **Exclusive Study Plan Generator**
- **Ongoing Live-Online Office Hours (2x/week)**
- **5 Full Length PCAT Practice**
- **1 Full Length PCAT Diagnostic**
- **Extra focus on high-yield and difficult subjects**
- **Review Book: 500+ pages**
- **Content Book: 200+ pages**
- **Lesson Videos: over 30 hours**
- **Content Videos: 50 videos with interactive quizzes**
- **11 Qbanks with over 450 questions**
- **Expertise Built & Supported by 99th percentile instructors**

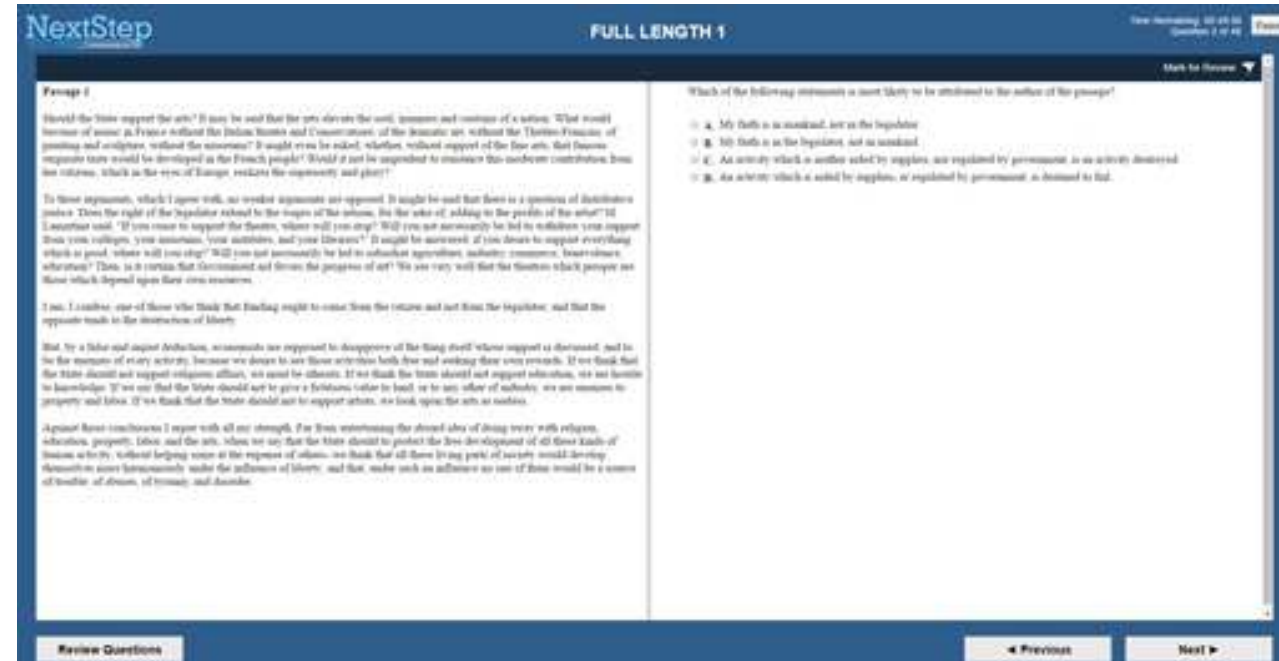


Most Realistic Practice Exams

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✓ **Your testing experience matters.**
Practice with the most representative PCAT exam platform available.

- Free Full-Length Diagnostic
- 5 Full-Length PCAT Exams
- Exclusive Study Plan Generator
- Lesson Book (print + online PDF)
- Review Book (print + online PDF)
- All 17 Lesson Videos
- All 50 Content Review Videos
- All Test Review Videos
- All Sections Exams
- Live Online Q&A Office Hours (2x/week)
- Online Forum Access
- **Full Exam Bundle— only \$99**



Next Step: Educate Every Day

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✓ **Get the ONLY FREE PCAT Practice Bundle**

- Full-Length PCAT Diagnostic Test
- Diagnostic Test Review Video (4 segments)
- Lesson 1 from PCAT Online Course
- PDF Sample: Lesson Book for Lesson 1
- PDF Sample: Review Book for Chapters 1–3
- Content Review Videos
 - Scientific Method and Data Interpretation
 - Quantitative Reasoning: Math Skills I
 - Chemistry: Substitution and Elimination Reactions
 - Biology: Kidney Structure and Function
- Exclusive Study Plan Generator
- Free Public Q&A Office Hours & Webinars

**Access your
FREE PCAT Practice now!**

**[nextstepprep.com/
free-pcat-practice-bundle](https://nextstepprep.com/free-pcat-practice-bundle)**

Take the Best Next Step

**Next
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Meet with an Academic Manager and build a strategy

- Discuss what works for you: from self-study to tutoring
- Personalize A Study Plan for YOU
- Plan around your study style and class/work schedule
- Speak with educational pros, not a call center

Attend our free webinars

- Download the FREE PCAT BUNDLE and take the Diagnostic
- Take advantage of the free webinars and open Office Hours with a focus on PCAT subject reviews and strategy sessions

Let's Get Social

- Follow us on Facebook, Instagram and YouTube

Contact an Academic
Manager for a free
PCAT Consultation
and plan your prep today!

[nextsteptestprep.com/
pcat-tutoring](https://nextsteptestprep.com/pcat-tutoring)

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Get Solid Advice for Your Next Step

CALL 888-530-6398 FOR A FREE CONSULT

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Questions?