

THE KEY TO RAISING MATH & SCIENCE SCORES

**EVIDENCE-BASED STRATEGIES
FOR STUDENT SUCCESS**

ABOUT THE MATH SECTION

60 QUESTIONS

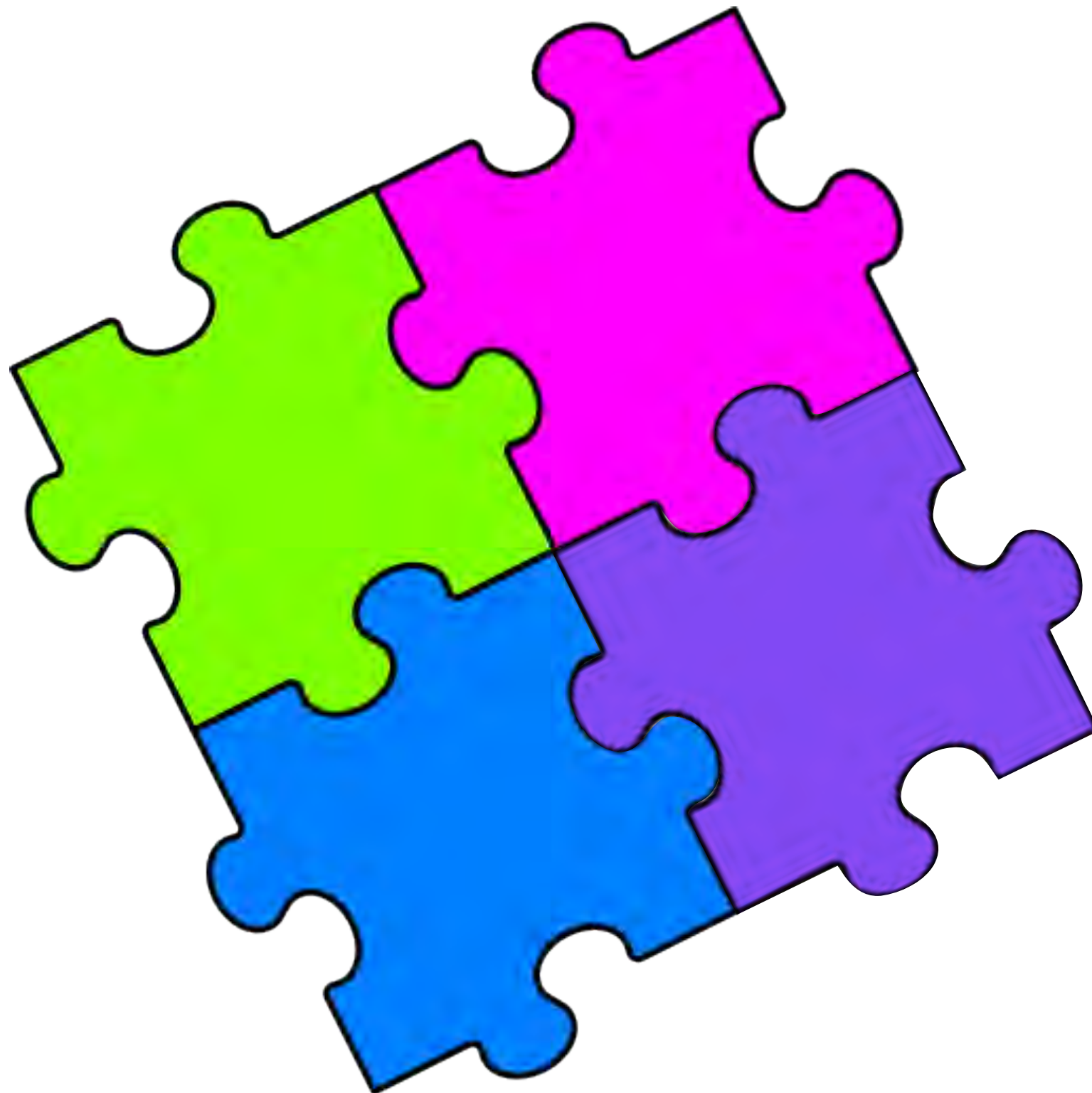
60 MINUTES

**QUESTIONS GET
HARDER AS YOU
GO ALONG**

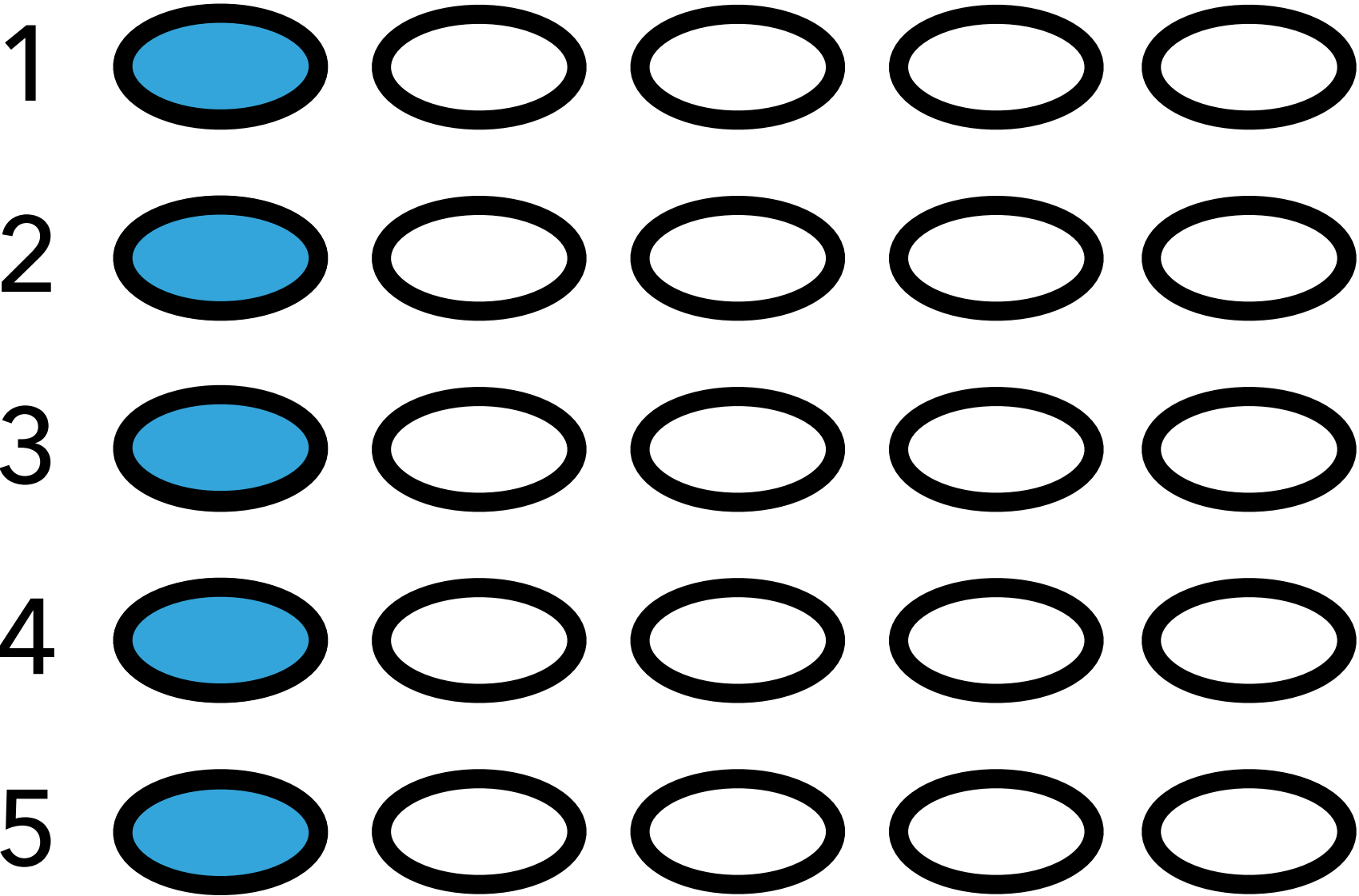
SUPER FAST!!

**MOST STUDENTS
DON'T KNOW HOW
TO DO THE HARDEST
PROBLEMS**

STRATEGY: PIECES (NOT THE WHOLE)



STRATEGY: BLIND GUESSING



MATH	
22	32-33
21	30-31
19	27-28
17	21-23

IF YOU WANT A SCORE OF 19-21

GUESS ON THE LAST 30 QUESTIONS

ANSWER THE FIRST 30 QUESTIONS

GUESS ALL THE SAME ANSWER CHOICE

TEST 2

1 (A) (B) (C) (D) (E)	11 (A) (B) (C) (D) (E)	21 (A) (B) (C) (D) (E)	31 (A) (B) (C) (D) (E)	41 (A) (B) (C) (D) (E)	51 (A) (B) (C) (D) (E)
2 (F) (G) (H) (J) (K)	12 (F) (G) (H) (J) (K)	22 (F) (G) (H) (J) (K)	32 (F) (G) (H) (J) (K)	42 (F) (G) (H) (J) (K)	52 (F) (G) (H) (J) (K)
3 (A) (B) (C) (D) (E)	13 (A) (B) (C) (D) (E)	23 (A) (B) (C) (D) (E)	33 (A) (B) (C) (D) (E)	43 (A) (B) (C) (D) (E)	53 (A) (B) (C) (D) (E)
4 (F) (G) (H) (J) (K)	14 (F) (G) (H) (J) (K)	24 (F) (G) (H) (J) (K)	34 (F) (G) (H) (J) (K)	44 (F) (G) (H) (J) (K)	54 (F) (G) (H) (J) (K)
5 (A) (B) (C) (D) (E)	15 (A) (B) (C) (D) (E)	25 (A) (B) (C) (D) (E)	35 (A) (B) (C) (D) (E)	45 (A) (B) (C) (D) (E)	55 (A) (B) (C) (D) (E)
6 (F) (G) (H) (J) (K)	16 (F) (G) (H) (J) (K)	26 (F) (G) (H) (J) (K)	36 (F) (G) (H) (J) (K)	46 (F) (G) (H) (J) (K)	56 (F) (G) (H) (J) (K)
7 (A) (B) (C) (D) (E)	17 (A) (B) (C) (D) (E)	27 (A) (B) (C) (D) (E)	37 (A) (B) (C) (D) (E)	47 (A) (B) (C) (D) (E)	57 (A) (B) (C) (D) (E)
8 (F) (G) (H) (J) (K)	18 (F) (G) (H) (J) (K)	28 (F) (G) (H) (J) (K)	38 (F) (G) (H) (J) (K)	48 (F) (G) (H) (J) (K)	58 (F) (G) (H) (J) (K)
9 (A) (B) (C) (D) (E)	19 (A) (B) (C) (D) (E)	29 (A) (B) (C) (D) (E)	39 (A) (B) (C) (D) (E)	49 (A) (B) (C) (D) (E)	59 (A) (B) (C) (D) (E)
10 (F) (G) (H) (J) (K)	20 (F) (G) (H) (J) (K)	30 (F) (G) (H) (J) (K)	40 (F) (G) (H) (J) (K)	50 (F) (G) (H) (J) (K)	60 (F) (G) (H) (J) (K)

MATH

25	38-39
24	36-37
23	34-35
22	32-33

IF YOU WANT A SCORE OF 22-25

GUESS ON THE LAST 15 QUESTIONS

ANSWER THE FIRST 45 QUESTIONS

GUESS ALL THE SAME ANSWER CHOICE

TEST 2

1 (A) (B) (C) (D) (E)	11 (A) (B) (C) (D) (E)	21 (A) (B) (C) (D) (E)	31 (A) (B) (C) (D) (E)	41 (A) (B) (C) (D) (E)	51 (A) (B) (C) (D) (E)
2 (F) (G) (H) (J) (K)	12 (F) (G) (H) (J) (K)	22 (F) (G) (H) (J) (K)	32 (F) (G) (H) (J) (K)	42 (F) (G) (H) (J) (K)	52 (F) (G) (H) (J) (K)
3 (A) (B) (C) (D) (E)	13 (A) (B) (C) (D) (E)	23 (A) (B) (C) (D) (E)	33 (A) (B) (C) (D) (E)	43 (A) (B) (C) (D) (E)	53 (A) (B) (C) (D) (E)
4 (F) (G) (H) (J) (K)	14 (F) (G) (H) (J) (K)	24 (F) (G) (H) (J) (K)	34 (F) (G) (H) (J) (K)	44 (F) (G) (H) (J) (K)	54 (F) (G) (H) (J) (K)
5 (A) (B) (C) (D) (E)	15 (A) (B) (C) (D) (E)	25 (A) (B) (C) (D) (E)	35 (A) (B) (C) (D) (E)	45 (A) (B) (C) (D) (E)	55 (A) (B) (C) (D) (E)
6 (F) (G) (H) (J) (K)	16 (F) (G) (H) (J) (K)	26 (F) (G) (H) (J) (K)	36 (F) (G) (H) (J) (K)	46 (F) (G) (H) (J) (K)	56 (F) (G) (H) (J) (K)
7 (A) (B) (C) (D) (E)	17 (A) (B) (C) (D) (E)	27 (A) (B) (C) (D) (E)	37 (A) (B) (C) (D) (E)	47 (A) (B) (C) (D) (E)	57 (A) (B) (C) (D) (E)
8 (F) (G) (H) (J) (K)	18 (F) (G) (H) (J) (K)	28 (F) (G) (H) (J) (K)	38 (F) (G) (H) (J) (K)	48 (F) (G) (H) (J) (K)	58 (F) (G) (H) (J) (K)
9 (A) (B) (C) (D) (E)	19 (A) (B) (C) (D) (E)	29 (A) (B) (C) (D) (E)	39 (A) (B) (C) (D) (E)	49 (A) (B) (C) (D) (E)	59 (A) (B) (C) (D) (E)
10 (F) (G) (H) (J) (K)	20 (F) (G) (H) (J) (K)	30 (F) (G) (H) (J) (K)	40 (F) (G) (H) (J) (K)	50 (F) (G) (H) (J) (K)	60 (F) (G) (H) (J) (K)

MATH	
27	43-44
26	40-42

IF YOU WANT A SCORE OF 26-27

GUESS ON THE LAST 10 QUESTIONS

ANSWER THE FIRST 50 QUESTIONS

GUESS ALL THE SAME ANSWER CHOICE

TEST 2

1 (A) (B) (C) (D) (E)	11 (A) (B) (C) (D) (E)	21 (A) (B) (C) (D) (E)	31 (A) (B) (C) (D) (E)	41 (A) (B) (C) (D) (E)	51 (A) (B) (C) (D) (E)
2 (F) (G) (H) (J) (K)	12 (F) (G) (H) (J) (K)	22 (F) (G) (H) (J) (K)	32 (F) (G) (H) (J) (K)	42 (F) (G) (H) (J) (K)	52 (F) (G) (H) (J) (K)
3 (A) (B) (C) (D) (E)	13 (A) (B) (C) (D) (E)	23 (A) (B) (C) (D) (E)	33 (A) (B) (C) (D) (E)	43 (A) (B) (C) (D) (E)	53 (A) (B) (C) (D) (E)
4 (F) (G) (H) (J) (K)	14 (F) (G) (H) (J) (K)	24 (F) (G) (H) (J) (K)	34 (F) (G) (H) (J) (K)	44 (F) (G) (H) (J) (K)	54 (F) (G) (H) (J) (K)
5 (A) (B) (C) (D) (E)	15 (A) (B) (C) (D) (E)	25 (A) (B) (C) (D) (E)	35 (A) (B) (C) (D) (E)	45 (A) (B) (C) (D) (E)	55 (A) (B) (C) (D) (E)
6 (F) (G) (H) (J) (K)	16 (F) (G) (H) (J) (K)	26 (F) (G) (H) (J) (K)	36 (F) (G) (H) (J) (K)	46 (F) (G) (H) (J) (K)	56 (F) (G) (H) (J) (K)
7 (A) (B) (C) (D) (E)	17 (A) (B) (C) (D) (E)	27 (A) (B) (C) (D) (E)	37 (A) (B) (C) (D) (E)	47 (A) (B) (C) (D) (E)	57 (A) (B) (C) (D) (E)
8 (F) (G) (H) (J) (K)	18 (F) (G) (H) (J) (K)	28 (F) (G) (H) (J) (K)	38 (F) (G) (H) (J) (K)	48 (F) (G) (H) (J) (K)	58 (F) (G) (H) (J) (K)
9 (A) (B) (C) (D) (E)	19 (A) (B) (C) (D) (E)	29 (A) (B) (C) (D) (E)	39 (A) (B) (C) (D) (E)	49 (A) (B) (C) (D) (E)	59 (A) (B) (C) (D) (E)
10 (F) (G) (H) (J) (K)	20 (F) (G) (H) (J) (K)	30 (F) (G) (H) (J) (K)	40 (F) (G) (H) (J) (K)	50 (F) (G) (H) (J) (K)	60 (F) (G) (H) (J) (K)

THE NITTY GRITTY

- ▶ You have to **READ** the questions.
- ▶ **Do NOT skip** any questions on **the first 30**.
- ▶ Use your **calculator** for **one-step** calculations.

FRACTIONS!

What is the largest value of x for which there exists a real value of y such that $x^2 + y^2 = 144$?

TOO BIG!

MUST BE
THIS ONE!

A. 12

~~B. 50~~

~~C. 90~~

~~D. 144~~

~~E. 288~~

AT THE MOST, YOU ONLY
HAVE TO TEST 2 ANSWER
CHOICES!!

QUESTIONS 1-40

Fractions

Graphs

Mean, Median, Mode

Negatives

Percentages

Perimeter, Volume, Area

Plug-in

Probability

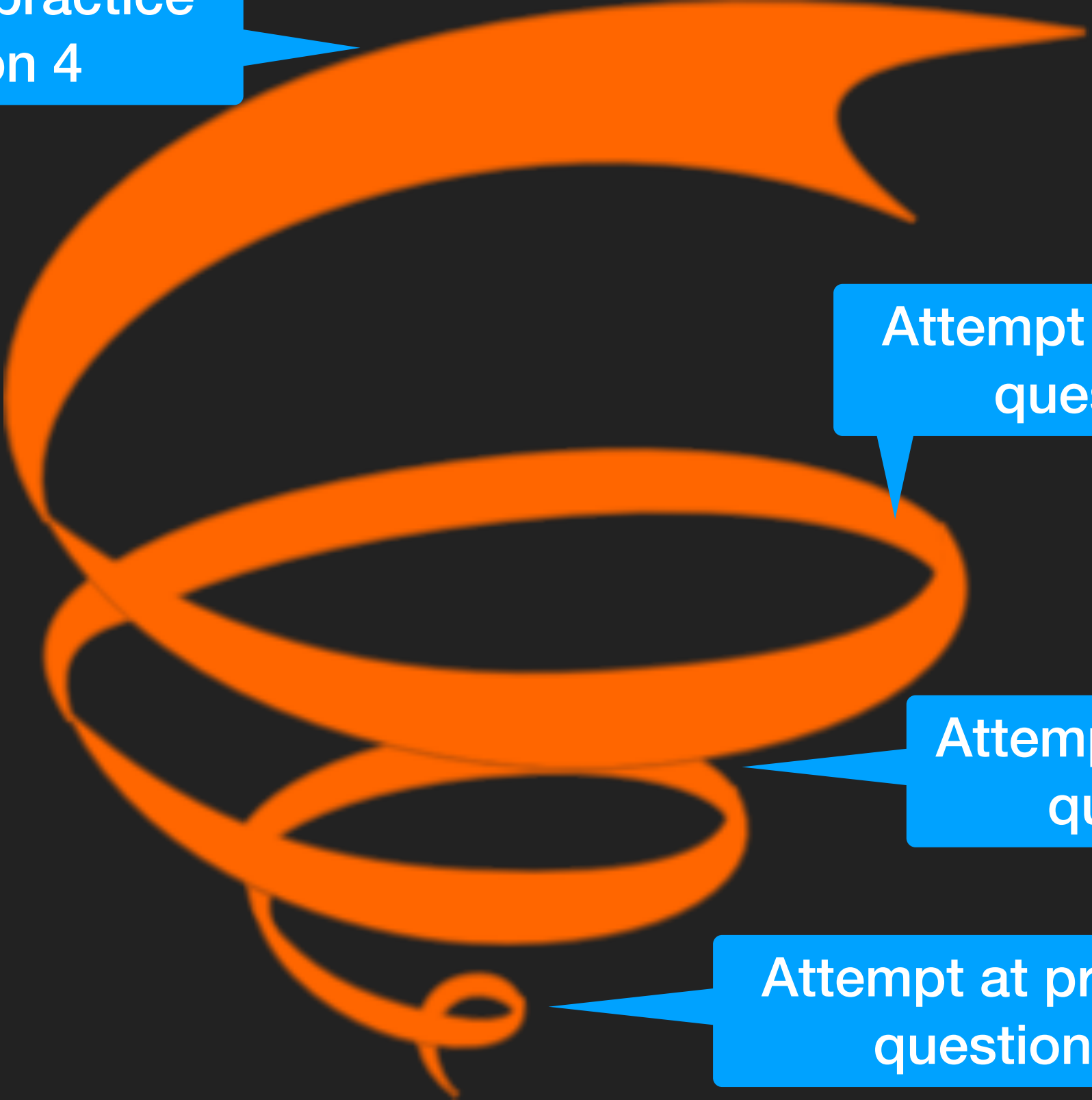
Ratios & Proportions

Real Life

Slope

Triangles

**TOP 12 MOST
FREQUENTLY TESTED
SKILLS**



Attempt at practice
question 4

Attempt at practice
question 3

Attempt at practice
question 2

Attempt at practice
question 1

Mini-lesson

PERIMETER

**THE DISTANCE AROUND THE OUTSIDE EDGE
OF A SHAPE**

FENCES

**WALLPAPER
BORDER**

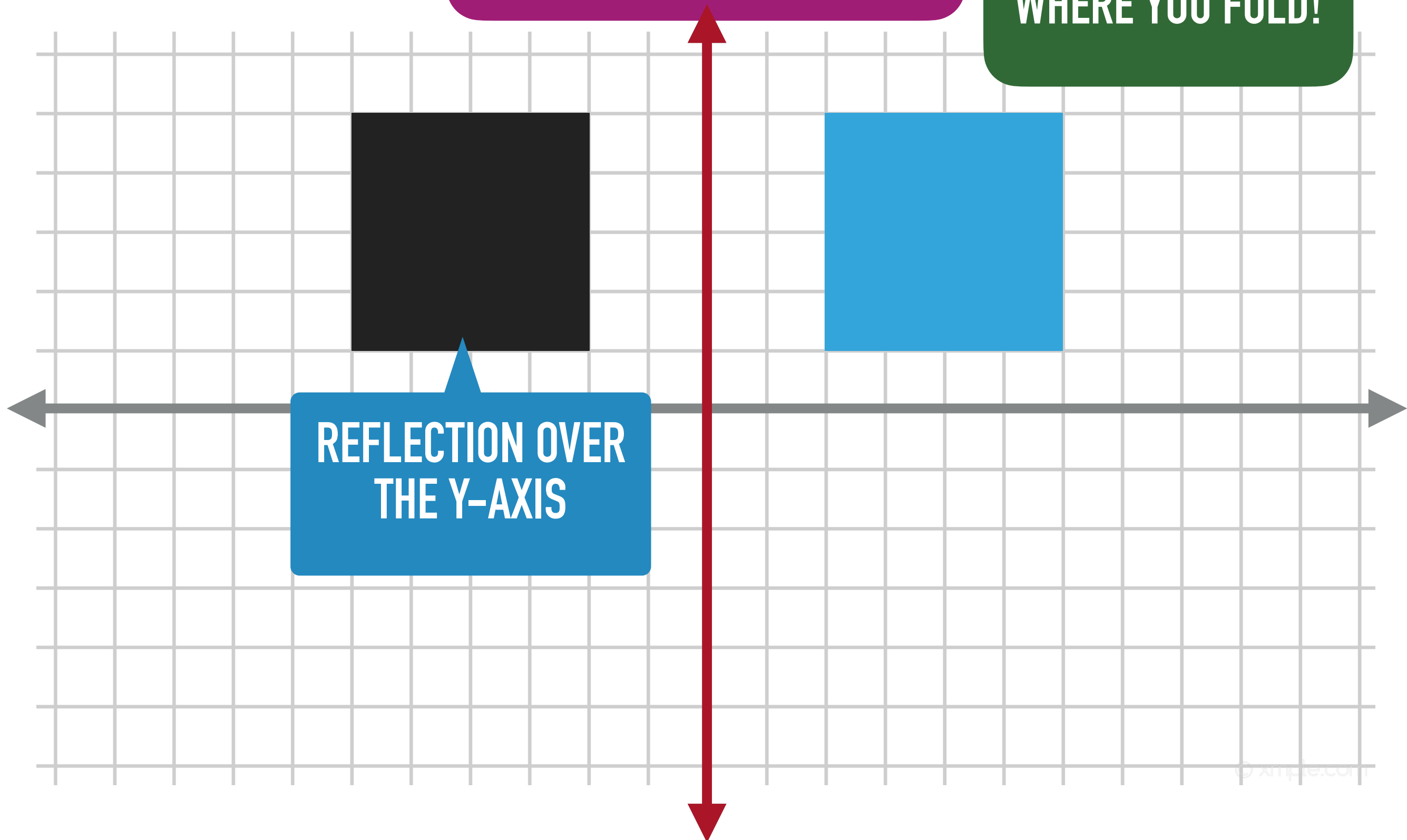
SIDEWALKS

**CHRISTMAS
LIGHTS**

REFLECTIONS

IT'S HELPFUL TO THINK ABOUT REFLECTIONS LIKE FOLDING A PIECE OF PAPER.

THE LINE OF REFLECTION IS WHERE YOU FOLD!



SLOPE

$$Y = MX + B$$

SLOPE

Y - INTERCEPT

Science

THE SCIENCE REASONING SECTION

- ▶ The last of 4 sections on the ACT
- ▶ Contains 40 questions and a time limit of 35 minutes
- ▶ 3 types of passages

5-7 minutes

**CHARTS &
GRAPHS**
(2-3 PASSAGES)

7-9 minutes

**EXPERIMENTS &
STUDIES**
(2-3 PASSAGES)

10-13 minutes

**MULTIPLE
PERSPECTIVES**
(1 PASSAGE)

DO THESE FIRST!!

**NO ITALICIZED
HEADERS**

THE SCIENCE REASONING SECTION

- ▶ The last of 4 sections on the ACT
- ▶ Contains 40 questions and a time limit of 35 minutes
- ▶ 3 types of passages

5-7 minutes

**CHARTS &
GRAPHS**
(2-3 PASSAGES)

7-9 minutes

**EXPERIMENTS &
STUDIES**
(2-3 PASSAGES)

10-13 minutes

**MULTIPLE
PERSPECTIVES**
(1 PASSAGE)

DO THESE SECOND!

**LABELED “EXPERIMENTS”
OR “STUDIES”**

THE SCIENCE REASONING SECTION

- ▶ The last of 4 sections on the ACT
- ▶ Contains 40 questions and a time limit of 35 minutes
- ▶ 3 types of passages

5-7 minutes

**CHARTS &
GRAPHS**
(2-3 PASSAGES)

7-9 minutes

**EXPERIMENTS &
STUDIES**
(2-3 PASSAGES)

10-13 minutes

**MULTIPLE
PERSPECTIVES**
(1 PASSAGE)

**LEAVE UNTIL LAST OR
SKIP COMPLETELY**

**LABELED "SCIENTISTS,"
"HYPOTHESES," OR "STUDENTS"**

Key	Reporting Category*		
	IOD	SIN	EMI
1. C	_____		_____
2. J			
3. B			
4. J			
5. A			
6. G			
7. C		_____	_____
8. J			
9. C			
10. J			
11. A			
12. F			
13. A	_____		
14. H			
15. B			
16. J			
17. A			
18. H			
19. A	_____		
20. G			

Key	Reporting Category*		
	IOD	SIN	EMI
21. C	_____		
22. H			
23. C			
24. H			
25. D			
26. J			
27. C		_____	
28. F			
29. B			
30. F			_____
31. D			
32. F		_____	_____
33. D			
34. G			
35. A			
36. J	_____		
37. D			
38. J			
39. B			
40. G	_____	_____	

Test 4 Science	Scale Score
40	36
—	35
39	34
38	33
—	32
37	31
36	30
—	29
35	28
34	27
32-33	26
31	25
29-30	24
26-28	23
24-25	22
22-23	21
20-21	20
18-19	19
17	18
15-16	17
14	16
13	15
11-12	14
10	13
9	12

CHARTS & GRAPHS

EXPERIMENTS

MULTIPLE PERSPECTIVES

IMPORTANT THINGS TO KNOW

- ▶ You don't actually have to know much of anything.
- ▶ Almost all of the information that you need is in the passage.
- ▶ Don't try to understand everything.
- ▶ There isn't enough time to read the whole passage (roughly 5 mins per passage)
- ▶ SKIM and pay attention to the axes on the graphs!

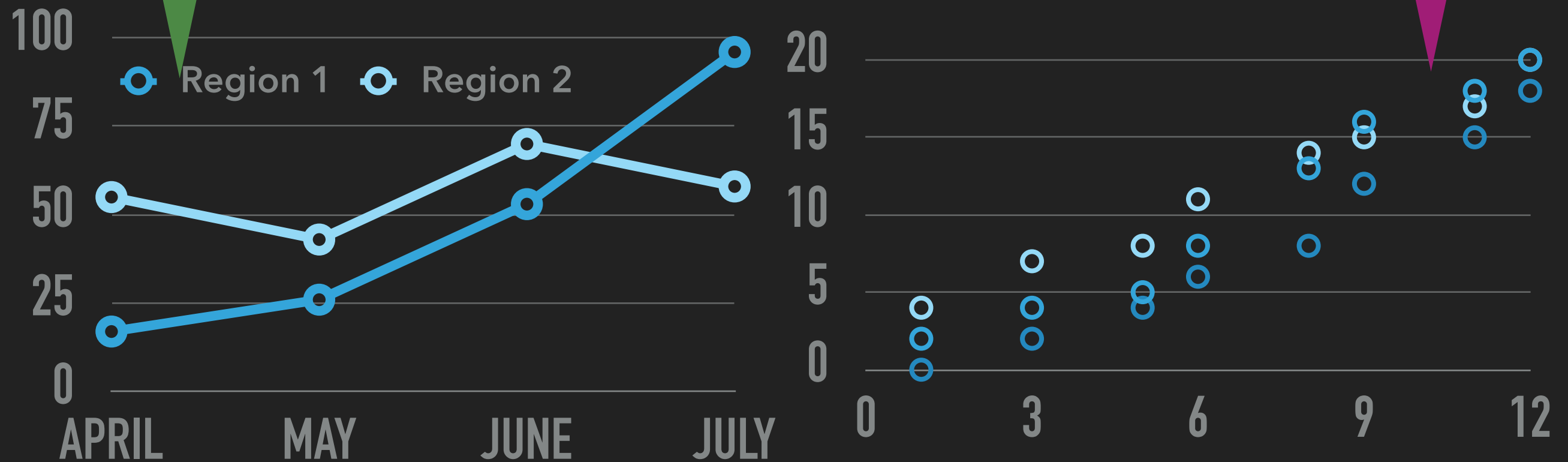
**FASTEST
SECTION**

CHARTS & GRAPHS

(2-3 PASSAGES)

**NO ITALICIZED
HEADERS**

BLURB: THIS TELLS YOU WHAT THE PASSAGE IS ABOUT



DO THESE FIRST!!

Read the **first sentence** of the blurb at the beginning

Skim the tables, charts & graphs.

Pay attention to the **axes**!

Let the questions **send you back** into the passage.

EXPERIMENTS & STUDIES

(2-3 PASSAGES)

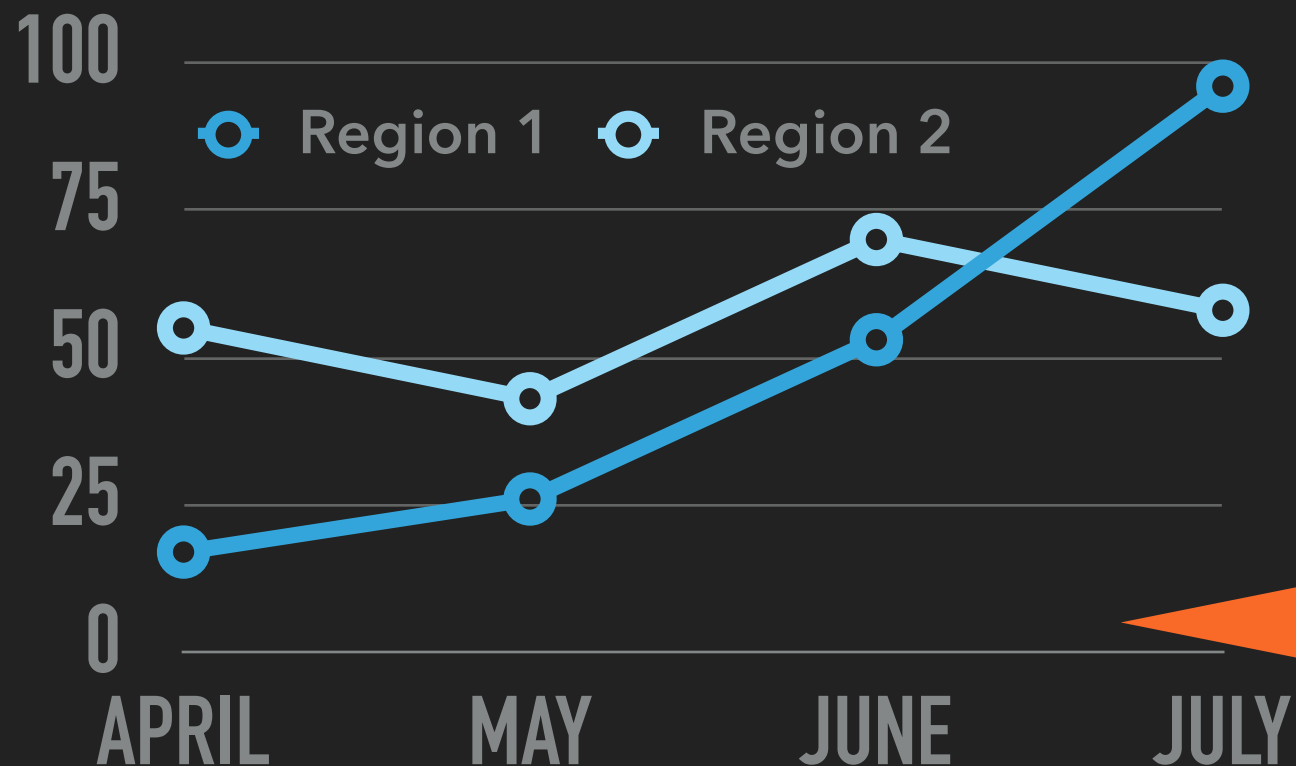
BLURB: THIS TELLS YOU WHAT THE PASSAGE IS ABOUT

EXPERIMENT 1

LONG, BORING PARAGRAPHS ABOUT
EXPERIMENT 1.

EXPERIMENT 2

LONG, BORING PARAGRAPHS ABOUT
EXPERIMENT 2.



THE AXES ON
GRAPHS ARE YOUR
BEST FRIEND!

Read the first sentence of the blurb at the beginning

Skim the experiments.

Pay attention to the axes!

Let the questions send you back into the passage.

MOST OF THE
TIME, YOU
NEVER HAVE
TO READ THE
EXPERIMENTS
AT ALL!

MULTIPLE PERSPECTIVES

(1 PASSAGE)

BLURB: THIS GIVES YOU THE FACTS THAT THE SCIENTISTS ARGUE ABOUT.

SCIENTIST 1

Fairly long essay. Bare bones; no fluff.

Sentence 1: states exactly what this scientist thinks.

Next sentences: states why they think that.

If the information appears in one place in this essay, it'll be in the exact same spot in the other one.

SCIENTIST 2

Fairly long essay. Bare bones; no fluff.

Sentence 1: states exactly what this scientist thinks.

Next sentence: states why they think that

If the information appears in one place in this essay, it'll be in the exact same spot in the other one.

MULTIPLE PERSPECTIVES

(1 PASSAGE)

BLURB: THIS GIVES YOU THE FACTS THAT THE HYPOTHESES ARE ABOUT.

HYPOTHESIS (OR STUDENT) 1

Short description.

If the information appears in one place here, it'll be in the exact same spot in the other ones.

HYPOTHESIS (OR STUDENT) 2

Short description.

If the information appears in one place here, it'll be in the exact same spot in the other ones.

HYPOTHESIS (OR STUDENT) 3

Short description.

If the information appears in one place here, it'll be in the exact same spot in the other ones.

HOW TO APPROACH MULTIPLE PERSPECTIVES PASSAGES

Read the entire blurb at the beginning.

Don't read the conflicting viewpoints at all.

Go straight to the questions.

Let the questions **send you back** into the passage.

Read the viewpoints as you encounter questions about them.

Attempt at practice
passage 4

Attempt at practice
passage 3

Attempt at practice
passage 2

Attempt at practice
passage 1

