
ACT
PREP
MATH
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Power Up: Math ACT Prep, Week 5

Pacing and Reflecting

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L•E•A•R•N

Essential Question

How can I increase my ACT score?

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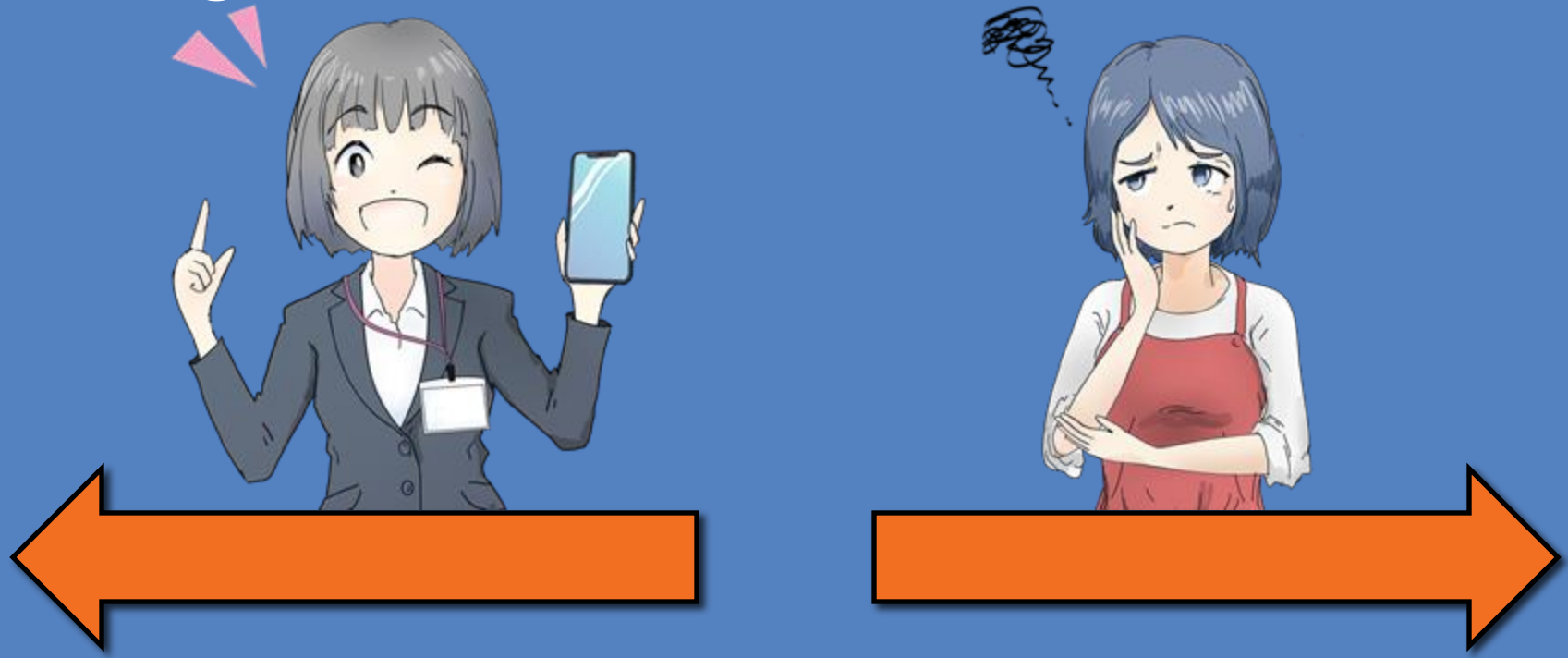
Learning Objectives

- Analyze why you might guess on an ACT question.
- Evaluate current performance regarding accuracy and pacing.

Feelings Towards the Math Portion of the ACT



Attitude Makes a Difference

“Whether you think you can or think you can’t, you’re right.”

– Henry Ford

Checkpoint Challenge

Leave your paper face down until the timer starts.

10-Minute Timer

GUS Method

- Next to each question, write the letter or symbol that best represents your feelings towards your answer.

 G—Guessed

 U—Unsure

 S—Sure

Checkpoint Challenge (Answers)

1) A
2) F
3) D
4) A
5) G
6) G
7) A
8) H
9) G
10) D

What or How?

Reflect on why you missed what you missed or why you guessed.

- Were you unsure of **WHAT** the question was asking for?
- Were you unsure of **HOW** to do the math?

Checkpoint Challenge: Question 1

What is the probability of randomly drawing a card that is NOT blue and is NOT yellow?

- **WHAT** in this problem tells us what it is was asking for?
- **HOW** do we find the probability of a complement?

$$P = 1 - P(B) - P(Y) = 1 - 0.2 - 0.4 = 0.4$$

Checkpoint Challenge: Question 2

For what value of k does the quadratic equation $x^2 - x + k = 0$ have solutions of $x = -3$ and $x = 4$?

- **WHAT** in this problem tells us what it is was asking for?
- **HOW** do we find the constant of a quadratic if we know the solutions?

$$(x+3)(x-4)$$

$$x^2 - 4x + 3x - 12$$

$$x^2 - x - 12$$

Checkpoint Challenge: Question 3

Given the function g defined as $g(x) = 6 - 2x$ has a domain $\{-2, 0, 1\}$, what is the range of g?

- **WHAT** in this problem tells us what it is was asking for?
- **HOW** do we find the range?

$$g(-2) = 6 - 2(-2) = 10$$
$$g(0) = 6 - 2(0) = 6$$
$$g(1) = 6 - 2(1) = 4$$

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Checkpoint Challenge: Question 4

Data Set A: 32, 39, 48, 50, 50, 61

How will the mean and the median of Data Set B compare to the median and mean of Data Set A?

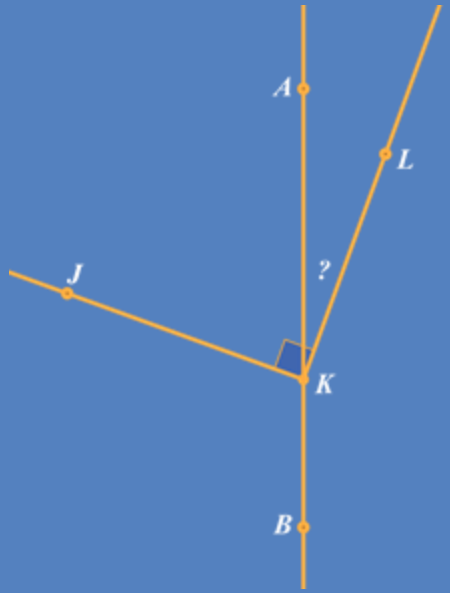
- **WHAT** in this problem tells us what it is was asking for?
- **HOW** do we find the mean or median?

$$median_A : \frac{48+50}{2} = 49$$

$$mean_A : \frac{280}{6} = 46.\overline{6}$$

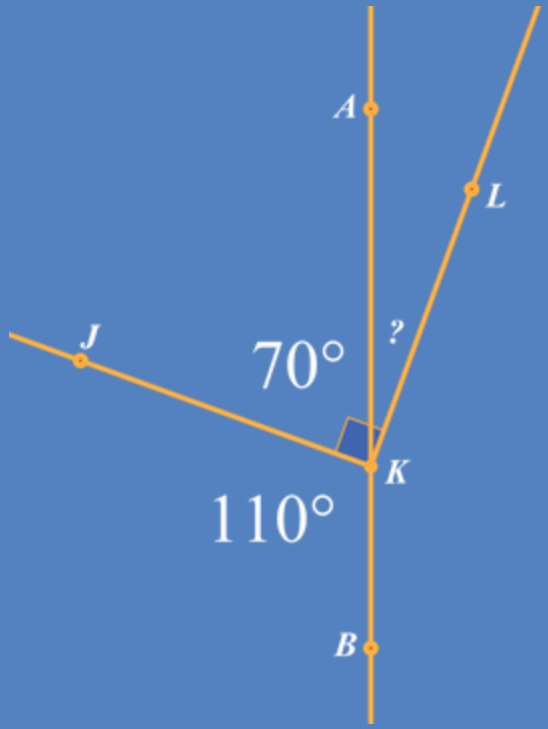
Checkpoint Challenge: Question 5

If it can be determined, what is the measure of $\angle AKL$?



- **WHAT** in this problem tells us what it is was asking for?
- **HOW** do we find the unknown angle?

Checkpoint Challenge: Question 5



$$\angle JKB + \angle JKA = 180°$$

$$110° + \angle JKA = 180°$$

$$\angle JKA = 70°$$

$$\angle JKA + \angle AKL = 90°$$

$$70° + \angle AKL = 180°$$

$$\boxed{\angle AKL = 20°}$$

Checkpoint Challenge: Question 6

The statement $2(x + 7) - x = 10 - (x - 14)$ is true for which of the following?

- **WHAT** in this problem tells us what it is was asking for?
- **HOW** do we solve for x?

$$2(x+7)-x=10-(x-14)$$
$$2x+14-x=10-x+14$$
$$2x=10$$
$$x=5$$

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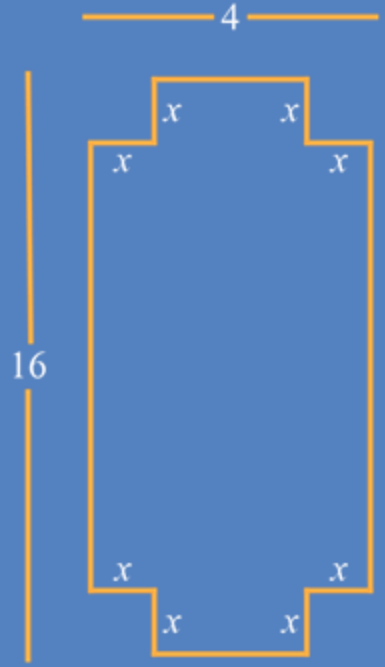
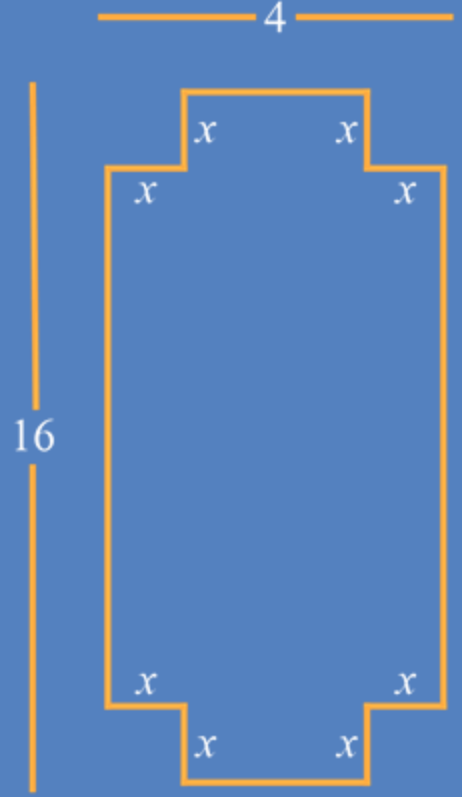
Checkpoint Challenge: Question 7

In terms of x, what is the area, in square inches, of the figure?



- **WHAT** in this problem tells us what it is was asking for?
- **HOW** do we find the area of a composite figure?

Checkpoint Challenge: Question 7



A_1 = Area of Whole Rectangle

A_2 =Area of Removed Squares

$$(A_1)-(A_2)$$

$$(4\cdot 16)-4(x\cdot x)$$

$$64-4x^2$$

Checkpoint Challenge: Question 8

For all values of a such that $a < -1$, which of the following expressions has the greatest value?

- **WHAT** in this problem tells us what it is was asking for?
- **HOW** do we compare values?

$$a < -1$$

$$2a < -2$$

$$a + 1 < 0$$

$$-\frac{1}{a} > 0$$

$$\frac{1}{a} < 0$$

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Checkpoint Challenge: Question 9

The solution to the equation $15 = 7v + 20$ is which of the types of numbers listed below?

- **WHAT** in this problem tells us what it is was asking for?
- **HOW** do we solve for v?

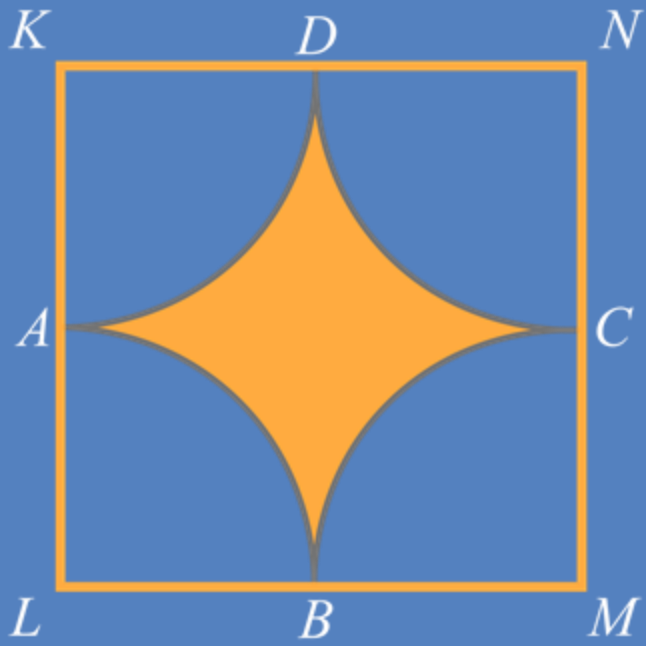
$$15 = 7v + 20$$

$$-5 = 7v$$

$$-\frac{5}{7} = v$$

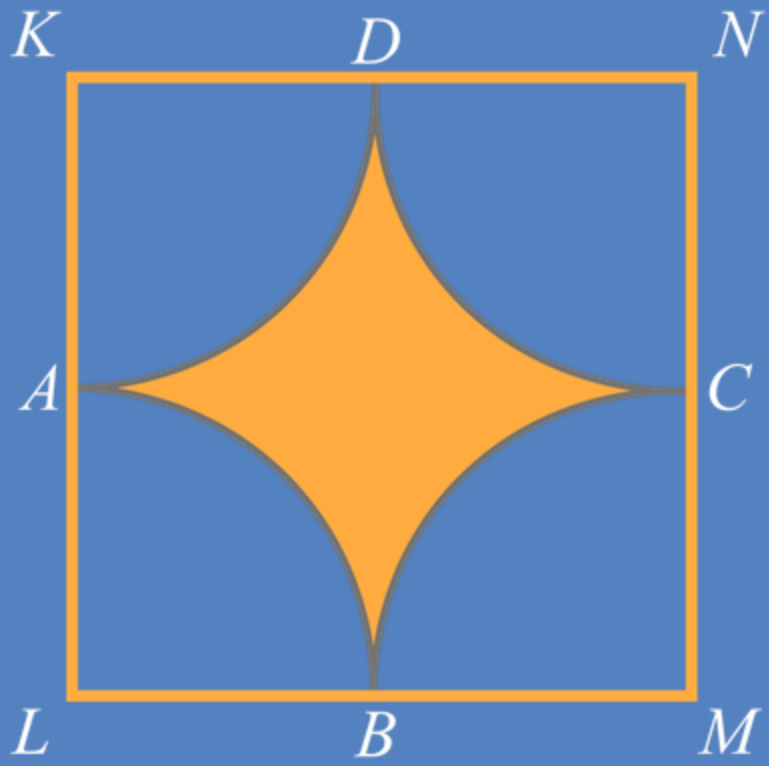
Checkpoint Challenge: Question 10

What is the area of the shaded region?



- **WHAT** in this problem tells us what it is was asking for?
- **HOW** do we find the area of a composite figure?

Checkpoint Challenge: Question 10



A_1 = Area of Whole Square

A_2 =Area of Partial Circles

$$(A_1)-(A_2)$$

$$(5\cdot 2)^2-\pi(5)^2$$

$$100-25\pi$$

Take Action

When you guessed, were you mostly unsure due to the **WHAT** or the **HOW** of the question(s)?

- **WHAT:** this likely indicates that you need to work on reading more carefully
- **HOW:** this likely indicates that you need to study in areas that you do not easily recall

Take Action

- Choose one **new** action to increase your math score.
- Add the new action to your handout.
- Over the next few weeks, practice your action and add the dates you practiced to your handout to keep track of your progress.

You Powered Up!

Achievement Unlocked:

Pacing

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