
ACT
PREP
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Power Up: Science ACT Prep, Week 8

Constants and Variables

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Essential Question

How can I improve my ACT score?

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Learning Objectives

- Identify the constant and variables in an experiment.
- Evaluate experiments based on a knowledge of constants and variables.

ACT Superscore Calculator

http://k20.ou.edu/superscore

TEST DATE	ENGLISH SCORE	MATH SCORE	READING SCORE	SCIENCE SCORE	COMPOSITE SCORE

SUPERSCORING RESULTS	BEST ENGLISH SCORE	BEST MATH SCORE	BEST READING SCORE	BEST SCIENCE SCORE	YOUR SUPERSCORE

Constants and Variables

Constant - What doesn't change during an experiment
Variable - Something that can be changed in an experiment

ENGLISH SCORE	MATH SCORE	READING SCORE	SCIENCE SCORE
18	19	23	14
18	19	23	24
18	19	23	16

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ENGLISH SCORE	MATH SCORE	READING SCORE	SCIENCE SCORE	COMPOSITE SCORE
18	19	23	14	19

BEST ENGLISH SCORE	BEST MATH SCORE	BEST READING SCORE	BEST SCIENCE SCORE	YOUR SUPERSCORE
18	19	23	14	19

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ENGLISH SCORE	MATH SCORE	READING SCORE	SCIENCE SCORE	COMPOSITE SCORE
18	19	23	14	19
18	19	23	24	21

BEST ENGLISH SCORE	BEST MATH SCORE	BEST READING SCORE	BEST SCIENCE SCORE	YOUR SUPERSCORE
18	19	23	24	21

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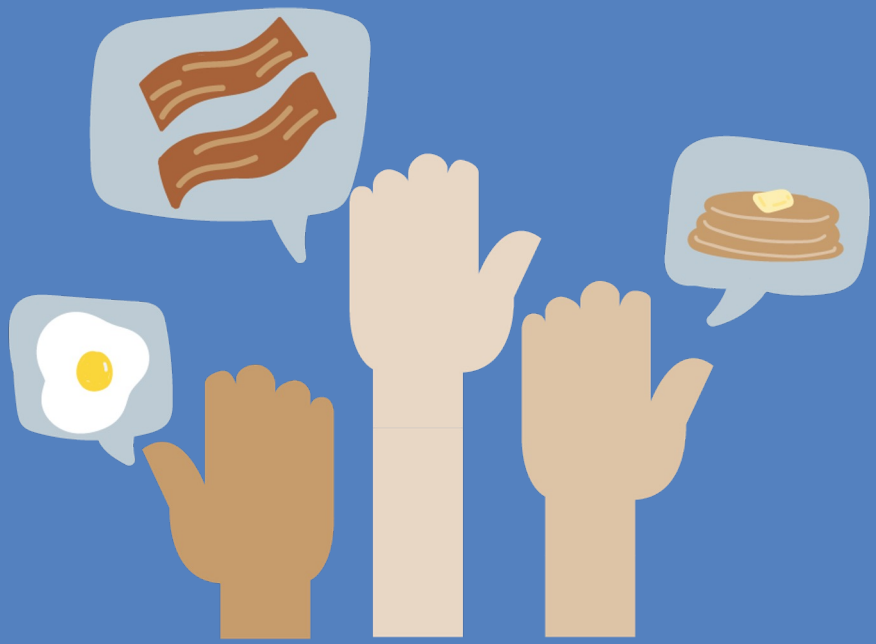
ENGLISH SCORE	MATH SCORE	READING SCORE	SCIENCE SCORE	COMPOSITE SCORE
18	19	23	14	19
18	19	23	24	21
18	19	23	16	19

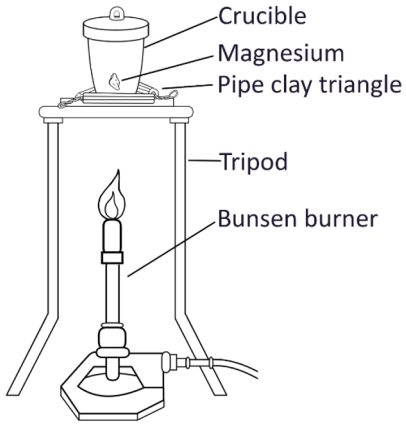
BEST ENGLISH SCORE	BEST MATH SCORE	BEST READING SCORE	BEST SCIENCE SCORE	YOUR SUPERSCORE
18	19	23	24	21

Chat Stations: Constants and Variables

- Number off 1-4.
- Visit the Chat Station that matches your assigned number.
- Work together to identify the constants and variables at your station.

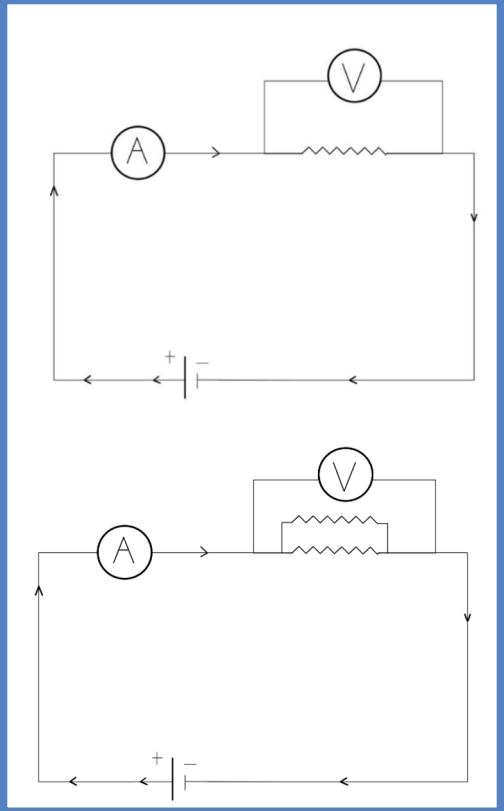


Chat Stations: Constants and Variables

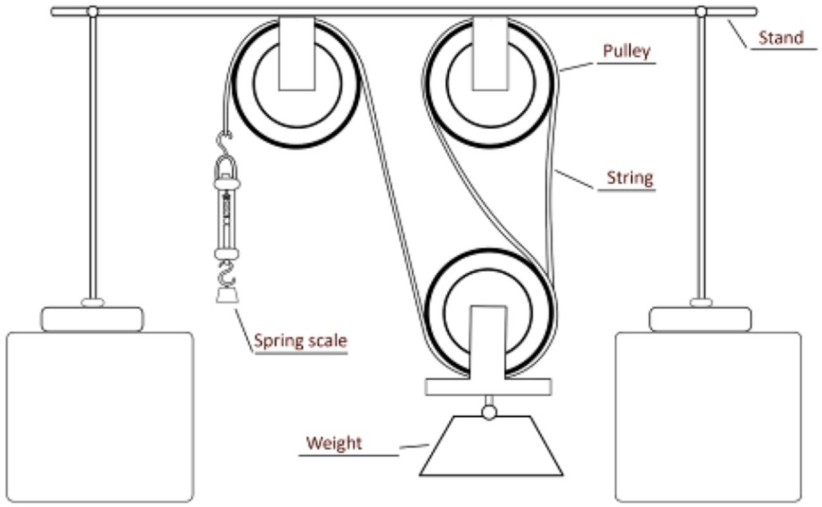


Experiment	Magnesium	Total	Oxygen
1	0.1	0.17	0.07
2	0.2	0.34	0.14
3	0.3	0.50	0.20
4	0.4	0.67	0.27

Chat Stations: Constants and Variables

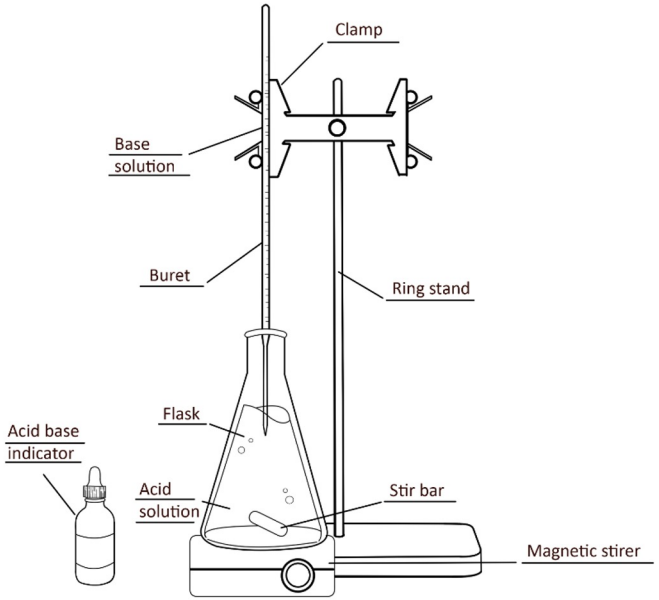


Chat Stations: Constants and Variables



A student wants to learn how using a pulley changes the force needed to move an object. He hypothesizes that more pulleys will require less force. He sets up an experiment as illustrated on the right, adding a new pulley each time. He uses the spring scale to measure and record the force. He then creates a bar graph to analyze the data. He finds that using the pulley system results in using less force to move the weight.

Chat Stations: Constants and Variables



A scientist wants to determine the concentration of an acid. He hypothesizes that if he adds a known base he can determine the acid content by when the solution is neutralized. He sets up an experiment as illustrated on the right. Then he uses the buret to slowly add the base to the acid. He notes the volume of the base that is required to neutralize the acid. He uses this volume to determine the acidity of the original solution.

Practice Passages

[15-Minute Timer]

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