




ACT
PREP

||||| MATH |||||





Power Up: Math ACT Prep, Week 2

Calculator Usage



Bell Ringer

- Find your calculator.



Bell Ringer: Question 1

If you have 60 minutes to complete 60 questions on the math portion of the ACT, how many questions per minute do you need to answer to not leave any blank?



Bell Ringer: Question 2

What if you only had 40 questions and 32 minutes to complete an exam, how many questions per minute would you need to answer to not leave any blank?



Bell Ringer – Reflection

- On which question(s) did you use your calculator?
- For which question(s) did you need to use a calculator?





Essential Question

How can I increase my ACT score?



K20
L•E•A•R•N

Learning Objectives

- Understand how to use my calculator.
- Evaluate when to use my calculator.

Calculator Usage

“...all problems [on the math portion of the ACT] may be solved without a calculator.”

– The ACT

Calculator Usage: What Can I Use?

- You can use any 4-function, scientific, or graphing calculator that is not on the prohibited list.
- **Use a calculator that you are familiar with!**
- Check out www.act.org/calculator-policy.html for more details.

ACT Prep: Question 1

When $x = -1$, what is the value of $3x^4 - 4x^3$?

A. -7

B. -1

C. 1

D. 5

E. 7

ACT Prep: Question 1 – Reflection

When $x = -1$, what is the value of $3x^4 - 4x^3$?

- Is it faster to solve this problem with or without a calculator?

ACT Prep: Question 2

What is 5% of 4.21×10^5 ?

F. 842

G. 2,105

H. 8,420

J. 21,050

K. 421,000

ACT Prep: Question 2 – Reflection

What is 5% of 4.21×10^5 ?

- Is it faster to solve this problem with or without a calculator?
- How should you use your calculator?
 - How do you enter a percentage?
 - How do you enter an exponent?

ACT Prep: Question 3

What is the value of $|3 - 17| - |-5|$?

A. -19

B. 9

C. 15

D. 19

E. 25

ACT Prep: Question 3 – Reflection

What is the value of $|3 - 17| - |-5|$?

- Is it faster to solve this problem with or without a calculator?
- How should you use your calculator?
 - Do you need to type absolute value symbols?
 - How would you type absolute value symbols?

ACT Prep: Question 4

What number is halfway between $\frac{2}{7}$ and $\frac{4}{3}$?

F. $\frac{1}{2}$

H. $\frac{34}{7}$

K. $\frac{22}{21}$

G. $\frac{3}{5}$

J. $\frac{17}{21}$

ACT Prep: Question 4 – Reflection

What number is halfway between $\frac{2}{7}$ and $\frac{4}{3}$?

- Is it faster to solve this problem with or without a calculator?
- How should you use your calculator?
 - How do you enter a fraction?

ACT Prep: Question 5

Which of the following integers is closest to $\frac{\sqrt{105}}{5}$?

A. 2

C. 5

E. 10

B. 4

D. 7

ACT Prep: Question 5 – Reflection

Which of the following integers is closest to $\frac{\sqrt{105}}{5}$?

- Is it faster to solve this problem with or without a calculator?
- How should you use your calculator?
 - How do you enter a square root (radical) symbol?

ACT Prep: Question 6

When $k = \frac{1}{2}$, what is the value of $\frac{4k}{k-2}$?

F. $-\frac{4}{3}$

H. $\frac{1}{3}$

K. 3

G. -1

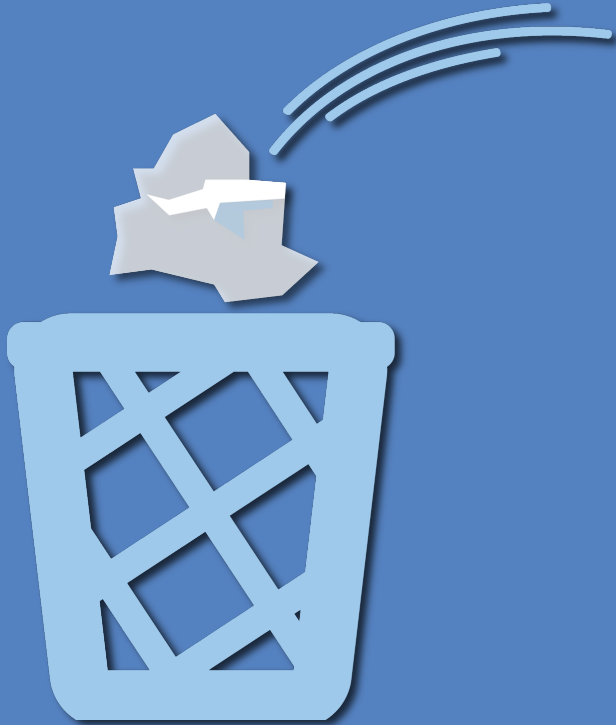
J. 2

ACT Prep: Question 6 – Reflection

When $k = \frac{1}{2}$, what is the value of $\frac{4k}{k-2}$?

- Is it faster to solve this problem with or without a calculator?
- How should you use your calculator?
 - How do you convert a decimal to a fraction?
 - What change to this problem would change your calculator usage?

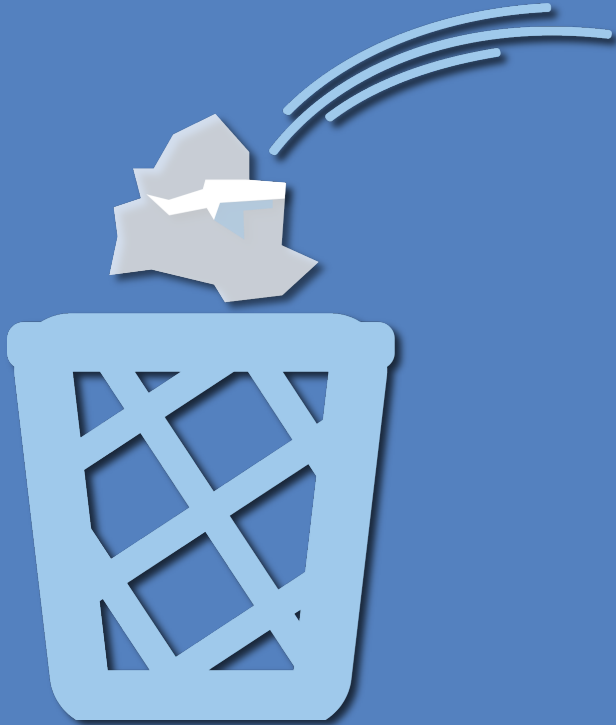
Commit and Toss



When or how should you use your calculator on the ACT?

- 1) On a piece of paper, write a sentence that captures what you learned today.

Commit and Toss



- 2) Crumple your paper.
- 3) Toss your paper.
- 4) Pick up someone else's paper.
- 5) Read the paper.



You Powered Up!

Achievement Unlocked:

Calculator Usage



K20
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