

NO MORE ALGEBRA

PLUGGING IN

Plugging In turns algebra problems into arithmetic problems. Plug in on a problems that contain variables in the answer choices.

"In terms of" is a needless phrase. If you see it, cross it out, and remember to plug in.

10. Claire is C years old and is 6 years younger than Alan. In terms of C , how many years old will Alan be in 3 years?
- (A) $C - 6$
(B) $C - 3$
(C) $C + 3$
(D) $C + 5$
(E) $C + 9$

Does the question have variables in the answer choices? **PLUG IN!**

20. If the sum of 4 consecutive integers is f , then, in terms of f , what is the least of these integers?
- (A) $\frac{f}{4}$
(B) $\frac{f-2}{4}$
(C) $\frac{f-3}{4}$
(D) $\frac{f-4}{4}$
(E) $\frac{f-6}{4}$

WHAT TO PLUG IN

Choose numbers that make the arithmetic as easy as possible.

- Do not plug in numbers that appear in the answer choices or in the question.
- Do not plug in zero or one.
- Do not plug in the same number for two different variables.

15. Lou drives 50 miles in a hours. If he must drive b miles, in terms of a and b , how many hours will the trip take?
- (A) $\frac{a}{50b}$
(B) $\frac{50}{ab}$
(C) $50ab$
(D) $\frac{50b}{a}$
(E) $\frac{ab}{50}$

WHERE TO START PLUGGING IN

For questions with more than one variable, choose the best place to start plugging in.

21. If $x = 3t - 1$ and $y = 12t^2$, what is the value of y in terms of x ?
- (A) $(x + 1)^2$
- (B) $4(x + 1)^2$
- (C) $\frac{3(x + 1)^2}{4}$
- (D) $\frac{4(x + 1)^2}{3}$
- (E) $(x - 1)^2$

Even if you love algebra, Plugging In is easier and more foolproof on the SAT.

NO VARIABLES? NO PROBLEM!

On the SAT, there are plenty of other opportunities to Plug In, even when there aren't variables in the answer choices.

Is there an unknown or a variable in the question? PLUG IN!

What you plug in depends on what the question asks you to find.

PLUG IN YOUR OWN NUMBER

If the question asks you to find a fraction or a percent, plug in your own number.

16. The price of a dress is reduced by $\frac{1}{5}$. If the new price is then reduced by $\frac{1}{4}$, the resulting price is what fractional part of the original price?
- (A) $\frac{1}{20}$
- (B) $\frac{2}{5}$
- (C) $\frac{9}{20}$
- (D) $\frac{11}{20}$
- (E) $\frac{3}{5}$
22. If $3a = b$, $2b = c$, $3c = d$, and $abcd \neq 0$, what is the value of $\frac{d}{a}$?

	7	7	
	0	0	
1	1	1	1
2	2	2	2
3	3	3	3
4	4	4	4
5	5	5	5
6	6	6	6
7	7	7	7
8	8	8	8
9	9	9	9

PLUG IN THE ANSWER CHOICES

For certain Plug In questions, you can't just make up any number. Instead, you have to plug in the numbers that ETS gives you. The good news is that you usually don't have to try every answer choice. If you start by plugging in C, you can often eliminate answers that are too big or too small.

• If the question asks you for a specific amount, *plug in the answer choices.*

• Start with answer choice C!

13. A mechanic buys a set of tools. He gives half of the tools to one coworker and five of them to another. If the mechanic now has nine tools left, how many tools did he buy originally?
- (A) 7
(B) 14
(C) 20
(D) 28
(E) 36
14. A 48-inch-long rope is cut into two pieces. If the length of one piece is $\frac{1}{3}$ the length of the other piece, how many inches long is the longer piece?
- (A) 36
(B) 32
(C) 24
(D) 16
(E) 12

Plug in the answer choices when:

- There are no variables in the answer choices
- The question asks, "How many?" or "How much?" or "What is the value of?"

15. A yacht captain sailed a total of 600 miles in two days. If the distance he sailed on the first day was 150 miles less than twice the distance he sailed on the second day, what was the distance, in miles, that he sailed on the second day?

- (A) 250
- (B) 275
- (C) 350
- (D) 375
- (E) 450

16. Adam is half as old as Bob and three times as old as Cindy. If the sum of their ages is 40, what is Bob's age?

- (A) 3
- (B) 6
- (C) 12
- (D) 18
- (E) 24

21. Al and Bill are playing a game. At a certain point in the game, if Al were to lose 2 of his chips to Bill, they would have the same number. If Bill were to lose 2 of his chips to Al, Al would have twice as many as Bill. How many chips does Al have just before either of these possible exchanges?

- (A) 10
- (B) 12
- (C) 14
- (D) 16
- (E) 18

PLUGGING IN MORE THAN ONCE

When you see a question with the word **MUST**, plug in once and use POE. If more than one answer choice remains, plug in something different.

6. If y is an integer, which of the following must be an odd integer?
- (A) y^2
 - (B) $3y$
 - (C) $2y + 1$
 - (D) $y + 3$
 - (E) $\frac{y}{2}$
20. If x and y are negative numbers, which of the following must be true?
- I. $x - y$ is negative
 - II. xy is a positive integer
 - III. $\frac{x}{y} \geq x$
- (A) None
 - (B) II only
 - (C) III only
 - (D) I and III only
 - (E) II and III only

If more than one answer choice works the first time you plug in—change your number and plug in until only one answer remains.