

NO MORE ALGEBRA

HOMework

PLUGGING IN

- Step 1 — Plug in your own numbers for each variable. (Don't plug in 0, 1, or numbers that appear in the question or the answer choices.) Write down the numbers you plugged in for each variable.
- Step 2 — Solve the problem using your own numbers. Write your answer down in the margin and circle it. This is your TARGET answer.
- Step 3 — Plug your own numbers into the answer choices. Check all the choices. The one that matches your TARGET is the answer.

8. Beth is two years older than Debbie and four years younger than Marnie. If Debbie is d years old, how old is Marnie in terms of d ?
- (A) $2d + 2$
(B) $2d + 4$
(C) $d + 2$
(D) $d + 4$
(E) $d + 6$

4. If rice costs r cents per kilogram, how many kilograms may be bought for \$5.00?
- (A) $\frac{50}{r}$
 (B) $\frac{5}{r}$
 (C) $\frac{r}{500}$
 (D) $500r$
 (E) $\frac{500}{r}$
6. If $x + 1$ is an even integer, which of the following must be an odd integer?
- (A) $x - 1$
 (B) $x^2 + 1$
 (C) $\frac{x+1}{2}$
 (D) $x + 3$
 (E) $x + 4$
6. If 6 more than x is two less than y , what is the value of y in terms of x ?
- (A) $x + 2$
 (B) $\frac{x+2}{2}$
 (C) $\frac{x+8}{2}$
 (D) $\frac{x+6}{2}$
 (E) $x + 8$
8. If x and y are integers and xy is an even integer, which of the following must be an odd integer?
- (A) $xy + 5$
 (B) $x + y$
 (C) $\frac{x}{y}$
 (D) $4x$
 (E) $7xy$
9. Susan can stamp x letters per minute. How many letters can she stamp in 3 hours?
- (A) $3x$
 (B) $30x$
 (C) $60x$
 (D) $100x$
 (E) $180x$
10. If d apples cost 5 cents, what is the cost, in cents, of n apples at the same rate?
- (A) $\frac{5n}{d}$
 (B) $5n$
 (C) $\frac{5d}{n}$
 (D) $5d$
 (E) $\frac{nd}{5}$
10. Bill is twice as old as Heidi and six years younger than Mel. If Heidi is h years old, how old is Mel in terms of h ?
- (A) $h - 4$
 (B) $h + 4$
 (C) $2h - 4$
 (D) $2h$
 (E) $2h + 6$

11. If p , q , and r are consecutive odd integers, and $p < q < r$, then in terms of r , $p =$
- (A) $r - 4$
 (B) $r - 2$
 (C) $r + 2$
 (D) $r + 4$
 (E) $\frac{r}{2}$
12. If 4 more than x is 2 times y , what is the value of y in terms of x ?
- (A) $2 + \frac{x}{2}$
 (B) $4 + \frac{x}{2}$
 (C) $\frac{x+2}{2}$
 (D) $2(x-2)$
 (E) $2x+4$
12. If x is an odd number, what is the greatest even number less than $4x - 3$?
- (A) $x + 1$
 (B) $x + 6$
 (C) $2x + 4$
 (D) $4x - 4$
 (E) $4x + 2$
13. If $a \neq 0$, and $a = 2b = 3c$, what is the value of $a + b$ in terms of c ?
- (A) $\frac{1}{2}c$
 (B) $2c$
 (C) $\frac{9}{2}c$
 (D) $5c$
 (E) $6c$
13. The smaller of two integers, r and $r + 3$, is multiplied by 3 and then subtracted from the other integer. Which of the following represents this operation?
- (A) $(r + 3) - 3r$
 (B) $\frac{r-3}{r+3}$
 (C) $(3r + 9) + r$
 (D) $r - (3r + 9)$
 (E) $\frac{r(r-3)}{3}$
14. If $-1 < x < 0$, which of the following has the greatest value?
- (A) x
 (B) x^3
 (C) $-\frac{1}{x}$
 (D) $\frac{1}{x}$
 (E) $1 + x$
16. Lisa, Eric, and Michelle buy a television. Lisa pays half as much as Eric and twice as much as Michelle. If Eric pays x dollars, in terms of x , how much does the television cost?
- (A) $2\frac{1}{2}x$
 (B) $\frac{7x}{4}$
 (C) $2x$
 (D) $3x$
 (E) $7x$

16. If a light bulb factory can produce 12 light bulbs in x minutes, then, in terms of x , how many light bulbs can it produce in 2 hours?
- (A) $2(12)x$
 (B) $12(60)x$
 (C) $\frac{2(12)}{x}$
 (D) $\frac{2(12)(60)}{x}$
 (E) $\frac{x}{2(12)(60)}$
17. A three-digit number has a hundreds digit h , a tens digit zero, and a units digit r . If this number is divided by 10, the result is
- (A) $\frac{h+r}{10}$
 (B) $h + \frac{r}{10}$
 (C) $h + r$
 (D) $10h + \frac{r}{10}$
 (E) $10h + r$
22. In the equation $w = \frac{2}{z^3}$ if the value of w is multiplied by $\frac{1}{8}$ then the value of z is multiplied by
- (A) $\frac{1}{6}$
 (B) $\frac{1}{3}$
 (C) 2
 (D) 3
 (E) 6
22. If $x - y$ is a multiple of 3, then which of the following must also be a multiple of 3?
- (A) $y - x$
 (B) $\frac{y - x}{2}$
 (C) $\frac{x + y}{2}$
 (D) $x + y$
 (E) xy
23. The sum of two consecutive even integers is n . What is the sum of the next two consecutive integers greater than n ?
- (A) $n + 3$
 (B) $n + 5$
 (C) $2n + 2$
 (D) $2n + 3$
 (E) $2n + 4$
23. If $\frac{a}{c} = \frac{b^2}{4}$ what is the effect on the value of a when c is halved and b is doubled?
- (A) a remains unchanged.
 (B) a is halved.
 (C) a is doubled.
 (D) a is multiplied by 4.
 (E) a is multiplied by 8.

23. The product of two positive numbers is k . If each of the numbers is increased by 2, the new product is how much greater than twice the sum of the two original numbers?
- (A) $k - 2$
 (B) k
 (C) $k + 2$
 (D) $k + 4$
 (E) $2k + 4$
23. Eight years ago, Sylvia was 2 times as old as Adam will be in 3 years. If Adam is a years old now, how old is Sylvia in terms of a ?
- (A) $3a - 4$
 (B) $2a + 14$
 (C) $2a + 6$
 (D) $\frac{7a + 8}{4}$
 (E) $\frac{a + 11}{2}$
24. Lori walks w miles a day to work at x minutes per mile and walks back at a rate of z minutes per mile. What is Lori's average (arithmetic mean) rate in minutes per mile per day?
- (A) $\frac{w + z}{2w}$
 (B) $\frac{2w}{x + z}$
 (C) $(x + z)(2w)$
 (D) $\frac{w(x + z)}{2w}$
 (E) $\frac{wx}{wz}$
24. At the first stop on its route, a bus picks up x passengers. At the second stop, y passengers get on the bus. At the third stop, $\frac{2}{3}$ of the passengers exit the bus. At the fourth stop, 2 passengers get on the bus. How many passengers is the bus carrying at this point?
- (A) $x + y + \frac{4}{3}$
 (B) $\frac{2}{3}(x + y - 2)$
 (C) $2 - \frac{2}{3}(x + y)$
 (D) $\frac{x + y + 6}{3}$
 (E) $x - \frac{2}{3}y + 2$
25. Pat had a dollars in the bank. She spent $\frac{1}{3}$ of her money on a new car. She then deposited b dollars into the same account. Later, Pat withdrew half of the funds to spend on her vacation. How much money is left in Pat's bank account?
- (A) a
 (B) b
 (C) $\frac{1}{3}(a + b) - \frac{1}{2}$
 (D) $\frac{1}{2}(b - \frac{1}{3}a)$
 (E) $\frac{2a + 3b}{6}$