

SAT NC Wednesday 10/17 Late start

$$g(x) = ax^2 + 24$$

For the function g defined above, a is a constant and $g(4)=8$. What is the value of $g(-4)$?

- a) 8
- b) 0
- c) -1
- d) -8

input output

1st Period	8:20 - 9:08	48
2nd Period	9:15-10:03	48
3rd Period	10:10-10:58	48
4th Period	11:05-11:53A	48
C LUNCH		11:55-12:25 30
5th Period	12:32-1:20	48
6th Period	1:27-2:15	48

1st method

$$\begin{aligned}
 g(4) &= a(4)^2 + 24 \\
 a(4)^2 + 24 &= 8 \\
 \Rightarrow a(16) + 24 &= 8 \\
 \Rightarrow 16a &= -16 \\
 \Rightarrow a &= \frac{-16}{16} = -1
 \end{aligned}$$

2nd method

(shortcut)

- type of functions: Quadratic
- Even symmetry
- $g(4)=8$
 $g(-4)=?$ same output for opposite input

Stuck

$$\begin{aligned}
 g(-4) &= 16a + 24 ? \\
 16(-1) + 24 & \\
 -16 + 24 & \\
 \textcircled{8} &
 \end{aligned}$$