## Preparing for the NEW SAT Mathematics



## Students review and master knowledge of problem solving, modeling, and algebraic structure for success on the math portion of the new SAT

Scaffolded coverage of the topics, as well as insights, strategies, and critical thinking skills specific to the redesigned SAT are presented in this studentfriendly book.

## Features

- complete review and comprehensive practice for each category
—Heart of Algebra
—Problem Solving and Data Analysis
—Passport to Advanced Math
-Additional Topics in Math
- full-length diagnostic test
- concise review of mathematics targeted to the new redesigned SAT
- four full-length SAT-type exams in test format
- four SAT-type summary tests for each of the four categories
- includes model SAT problems for all objectives
- all questions have a complete solution explanation with embedded solution strategies

Fully-worked examples provide students with the information they need to understand solutions to problems.

## Think it Through

Example 1
Let $g(x)=|x|$ and $h(x)=2$. Let $f(x)=g(x)+h(x)=|x|+2$. Which graph is a representation of $f(x)$ ?
A)


Solution
We are told that $f(x)=g(x)+h(x)=|x|+2$. This means that the graph of $f(x)$ is the graph of $g(x)$ translated 2 positive units in the vertical direction. The graph below are translated in the wrong direction, so eliminate those answer choices. Graph $D$ is moved 1 unit in the positive vertical direction, so it is not correct. Select answer choice B

Model SAT problems tie to the book's content and serve as perfect preparation for the exam.

## Model SAT Problems

1. Joakim paid $\$ 8.25$ for $x$ pounds of candy. Antonia bought $x+1$ pounds of candy at the same price per pound and paid $\$ 9.50$. Which equation could be used to find the price per pound for the candy?
A) $8.25 x=9.50(x+1)$
B) $8.25 x=\frac{x+1}{9.25}$
C) $\frac{8.25}{x}=\frac{9.5}{x+1}$
D) $x(x+1)=(8.95)(9.5)$

Strategy: The cost of $\$ 8.25$ is associated with $x$ pounds of candy, and $x+1$ pounds
of candy is associated with $\$ 9.50$. Then, the cost per pound is total cost
so $\frac{8.25}{x}=\frac{9.5}{x+1}$. This is answer choice $C$.

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