

MATH MASTERY WORKBOOK

Algebra 1 + Geometry · Word Problems · Self-Study Edition

PART 1 — ALGEBRA 1

Memory Key: ISOLATE → SOLVE → CHECK — Get the variable alone, then verify your answer.

Q1 · ALGEBRA

Maria has 3 times as many stickers as Jake. Together they have 48 stickers. How many stickers does Jake have?

Hint: Let Jake = x , Maria = $3x \Rightarrow x + 3x = 48$

Key: TOTAL / PARTS ($4x = 48$, $x = 12$)

- A) 16
C) 36
- B) 12
D) 24

Q2 · ALGEBRA

A train travels at 60 mph. Another train travels at 90 mph in the same direction, starting 2 hours later. How many hours after the second train departs does it catch the first?

Hint: $d = r \cdot t \Rightarrow 60(t+2) = 90t$

Key: SAME DISTANCE (head-start = extra time for 1st train)

- A) 3 hrs
C) 5 hrs
- B) 4 hrs
D) 6 hrs

Q3 · ALGEBRA

The sum of two consecutive odd integers is 76. What is the larger integer?

Hint: Consecutive odds differ by 2. Let them be n and $n+2$.

Key: ODD CONSECUTIVE $\Rightarrow +2$ (not $+1$)

- A) 37
C) 41
- B) 39
D) 38

Q4 · ALGEBRA

A store sells apples for \$1.20 each and oranges for \$0.80 each. Sam buys 10 fruits and spends \$9.60. How many apples did Sam buy?

Hint: $a + o = 10$ and $1.2a + 0.8o = 9.60$

Key: SYSTEM of EQUATIONS (substitution)

- A) 4
C) 6
- B) 5
D) 7

Q5 · ALGEBRA

A number is 5 more than twice another number. Their sum is 29. What is the smaller number?

Hint: $x + (2x + 5) = 29 \Rightarrow 3x = 24$

Q11: C Q12: C Q13: B Q14: B Q15: A Q16: B Q17: A Q18: C Q19: C Q20: B

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