

MOMENTUM MATH LEVEL G



TABLE OF CONTENTS

Unit 4—Variables and Number Properties

Lesson A: Variables	301
<i>What is a variable?</i>	
Lesson B: Evaluating Expressions	311
<i>How do you find the value of an expression?</i>	
Lesson C: Representing Multiplication and Division	321
<i>How do you represent multiplication and division in algebra?</i>	
Lesson D: Expressions with More than One Operation	331
<i>How do you show more than one operation in an expression?</i>	
Lesson E: The Order of Operations	341
<i>What is the order of operations and why do we need it?</i>	
Lesson F: Expressions with More than One Unknown.	351
<i>How can you use two or more variables to model real-world situations?</i>	
Lesson G: The Commutative Property	361
<i>What is the commutative property and how can it be used?</i>	
Lesson H: The Associative Property	371
<i>What is the associative property and how can it be used?</i>	
Lesson I: The Distributive Property.	381
<i>What is the distributive property and how can it be used?</i>	
Lesson J: Simplifying Expressions	391
<i>How can number properties help you simplify expressions?</i>	
Glossary	A1

VARIABLES

Today's Destination What is a variable?



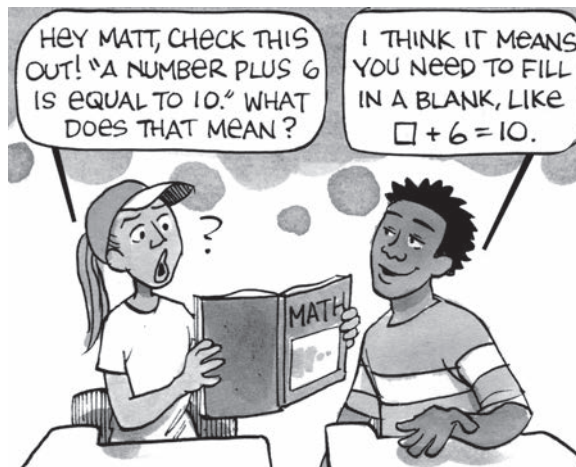
Vocabulary

Equation A number sentence relating two expressions that are equal in value

Variable A letter or symbol that represents an unknown value or a value that can change



Problem of the Day



What is the answer to Marta's math problem? _____



IN THE DRIVER'S SEAT

Simplify.

1) $-9^2 =$ _____

4) $6 + 6 + 6 \div 3 =$ _____

2) $(-9)^2 =$ _____

5) $(6 + 6 + 6) \div 3 =$ _____

3) $9^2 =$ _____

6) $\frac{6 + 6 + 6}{3} =$ _____

For each expression, write brackets or parentheses to show which computation you will perform first. Then simplify the expression.

7) $7 + 8 \div 4$

Compute It!

8) $5^2 \div 10$

Compute It!

9) $1 - 11^2 + 9$

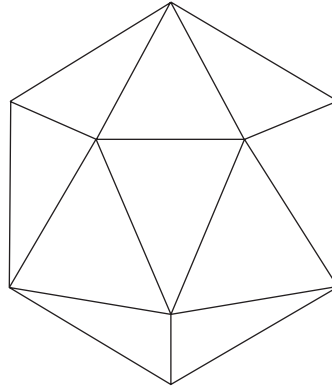
Compute It!

10) $\frac{7 + 17}{8} - 12$

Compute It!


SIDE TRIPS

- 1) An icosahedron is a solid figure made of 20 triangular faces. A regular icosahedron has 20 identical equilateral triangles for faces. The formula for the area of a triangle is $\frac{1}{2} \cdot b \cdot h$. Find the surface area (the total area of all the triangles) of a regular icosahedron when $b = 3$ centimeters and $h = 2.6$ centimeters.



Compute It!

- 2) Circle the operations that will result in an increase of value if $x = 3$.

multiply x by 0

multiply x by 1

add 0 to x

add -3 to x

add 1 to x

multiply x by $\frac{1}{3}$

- 3) Circle the operations that will result in an increase of value if $x = -3$.

multiply x by 0

add 0 to x

add 1 to x

add -3 to x

multiply x by 1

multiply x by $\frac{1}{3}$