LESSON MAKER PRO

Variable Power

Use letters to write number stories.

GRADE 6 · 6.EE.B.6

CCSS.Math.Content.6.EE.B.6 "Use variables to represent numbers and write expressions when solving a real-world or mathematical problem; understand that a variable can represent an unknown number, or, depending on the purpose at hand, any number in a specified set."

NAME _____ DATE _____

VARIABLES IN EXPRESSIONS

A variable is a letter that stands for a number. Write an expression to show the operations in the situation, and state a set of values when the situation limits the variable.

WORKED EXAMPLE

A library has b books on each of 6 shelves. Write an expression for the total number of books.

1. One shelf has b books.
2. Multiply b by 6 shelves.
3. Write 6b.

Answer: 6b

PRACTICE 5 problems

1 Let n be any whole number. Write an expression for 9 more than n.

ANSWER _____

2 Let p represent an unknown number of pages. Write an expression for 4 times p.

ANSWER _____

3 A ride pass costs $12, plus $3 for each ride r. Write an expression for the cost.

ANSWER _____

4 A box has m markers. Then 8 markers are used. Write an expression for the markers left.

ANSWER _____

5 Tickets cost $5 each. Let t be the number of tickets. Write an expression for the cost.

ANSWER _____

APPLY IT Show your work

1 Rina saves $5 each week for headphones. Let w be the number of weeks. Write an expression for her savings, then find her savings after 14 weeks.

WORK SPACE

ANSWER _____

2 An online game gives 7 coins for each quest. Let q be the number of quests. Write an expression for the coins, then find the coins for 9 quests.

WORK SPACE

ANSWER _____

CHALLENGE One step up

A club buys x packs of stickers. x can be 1, 2, 3, or 4. Each pack has 7 stickers. Write an expression for the total stickers and list all possible totals.

WORK SPACE AND ANSWER

ANSWER KEY

Variable Power

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PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Let n be any whole number. Write an expression for 9 more than n.	**n+9**
2	Let p represent an unknown number of pages. Write an expression for 4 times p.	**4p**
3	A ride pass costs $12, plus $3 for each ride r. Write an expression for the cost.	**12 + 3r**
4	A box has m markers. Then 8 markers are used. Write an expression for the markers left.	**m-8**
5	Tickets cost $5 each. Let t be the number of tickets. Write an expression for the cost.	**5t**

PART 2 · APPLY IT

1. **5w; $70** The expression is 5w. Substitute 14 for w: 5(14) = 70.
2. **7q; 63 coins** The expression is 7q. Substitute 9 for q: 7(9) = 63.

CHALLENGE

7x; 7, 14, 21, 28

Accept equivalent forms such as 9 + n for n + 9 and 3r + 12 for 12 + 3r. For the challenge, students should give both the expression and all four totals.