LESSON MAKER PRO

Expression Decoder

Turn situations and symbols into clear math.

GRADE 6 · 6.PAR.6.3

6.PAR.6.3 "Write and read expressions that represent operations with numbers and variables in realistic situations."

NAME _____ DATE _____

BUILD AND READ EXPRESSIONS

An expression uses numbers, operations, and x to show a quantity. Match words such as add, subtract, times, and divided by to the correct operation. Use parentheses when an entire sum or difference must be multiplied or divided.

WORKED EXAMPLE

A game gives 9 points for each of x levels completed, then takes away 4 points. Write and read an expression for the score.

1. Each completed level gives 9 points, so write 9x.
2. Take away the 4-point penalty: 9x - 4.
3. Read the expression from left to right.

Answer: 9x - 4; nine times x, minus four.

PRACTICE 6 problems

1 Write an expression for: 6 times x, increased by 11.

ANSWER _____

2 Read the expression 15 - 3x in words.

ANSWER _____

3 Write an expression for: x divided by 12, then increased by 5.

ANSWER _____

4 Read the expression 7(x + 2) in words.

ANSWER _____

_____

5 Write an expression for: 14 plus x divided by 10.

ANSWER _____

6 Read the expression 13x + 16 in words.

ANSWER _____

_____

APPLY IT Show your work

1 A student club sells x stickers for $3 each. The club pays an $18 booth fee. Write and read an expression for the money left after the fee.

WORK SPACE

ANSWER _____

2 Your game account starts with 24 tokens. You earn 5 tokens for each of x quests, then spend 7 tokens. Write and read an expression for your token total.

WORK SPACE

ANSWER _____

CHALLENGE One step up

The art club packs x prints into each of 5 folders and adds 12 extra prints. It divides all the prints equally among 3 display tables. Write an expression for the number of prints on each table. Explain why 5x + 12/3 is not correct.

WORK SPACE AND ANSWER

ANSWER KEY

Expression Decoder

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PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Write an expression for: 6 times x, increased by 11.	**6x + 11**
2	Read the expression 15 - 3x in words.	**fifteen minus three times x**
3	Write an expression for: x divided by 12, then increased by 5.	**x/12 + 5**
4	Read the expression 7(x + 2) in words.	**seven times the sum of x and two**
5	Write an expression for: 14 plus x divided by 10.	**14 + x/10**
6	Read the expression 13x + 16 in words.	**thirteen times x, plus sixteen**

PART 2 · APPLY IT

1. **3x - 18; three times x, minus eighteen.** The club earns 3x dollars from sticker sales. Subtract the $18 booth fee.
2. **24 + 5x - 7; twenty-four plus five times x, minus seven.** Start with 24 tokens, add 5x tokens earned from quests, and subtract 7 tokens spent.

CHALLENGE

(5x + 12)/3. The total number of prints, 5x + 12, must be grouped before dividing all of it by 3.

Accept equivalent expressions that keep the same operations, such as 11 + 6x for 6x + 11. For reading responses, accept clear equivalent wording that names the operations and any grouped sum.