

Expression Action Lab

Use expressions to tell what happens in a situation.

GRADE 5 • 5.NR.5.1

5.NR.5.1 "Write, interpret, and evaluate simple numerical expressions involving whole numbers with or without grouping symbols to represent actual situations."

NAME _____

DATE _____

BUILD THEN SOLVE

An expression uses numbers and operation signs to show what happens in a situation. Work inside parentheses first, then multiply or divide, then add or subtract.

WORKED EXAMPLE

A supply room receives 5 boxes of 14 markers. Then 4 markers are used. Write and evaluate an expression for the markers left.

1. Write: $(5 * 14) - 4$
2. Multiply: $5 * 14 = 70$
3. Subtract: $70 - 4 = 66$

Answer: $(5 * 14) - 4 = 66$ markers

PRACTICE 6 problems

1 Evaluate: $32 + 6 * 7$

ANSWER _____

2 Evaluate: $(32 + 6) * 7$

ANSWER _____

3 A library puts 9 books on each of 8 carts, then adds 13 more books. Write and evaluate an expression for the total number of books.

ANSWER _____

4 A video game store has 63 game cards. It packs 7 bags with 6 cards in each bag. Write and evaluate an expression for the cards left.

ANSWER _____

5 Evaluate: $96 / (8 * 2)$

ANSWER _____

6 Which expression represents 72 points shared equally by 9 players after 18 bonus points are added? A. $72 + (18 / 9)$ B. $(72 + 18) / 9$ C. $72 - (18 * 9)$

ANSWER _____

APPLY IT Show your work

- 1** At a robotics club, 7 teams build 12 paper bridges each. The club displays 19 extra bridges made during practice. How many bridges are displayed?

WORK SPACE

ANSWER _____

- 2** A gamer starts with 81 tokens. The gamer spends 6 tokens in each of 9 levels, then earns 27 bonus tokens. How many tokens does the gamer have now?

WORK SPACE

ANSWER _____

CHALLENGE One step up

CHALLENGE

A game club has 72 prize tickets. It buys 48 more tickets, then divides all the tickets equally among 8 winners. Write an expression and explain why parentheses are needed.

PART 1 • PRACTICE

#	PROBLEM	ANSWER
1	Evaluate: $32 + 6 * 7$	74
2	Evaluate: $(32 + 6) * 7$	266
3	A library puts 9 books on each of 8 carts, then adds 13 more books. Write and evaluate an expression for the total number of books.	$(9 * 8) + 13 = 85$ books
4	A video game store has 63 game cards. It packs 7 bags with 6 cards in each bag. Write and evaluate an expression for the cards left.	$63 - (7 * 6) = 21$ cards
5	Evaluate: $96 / (8 * 2)$	6
6	Which expression represents 72 points shared equally by 9 players after 18 bonus points are added? A. $72 + (18 / 9)$ B. $(72 + 18) / 9$ C. $72 - (18 * 9)$	B. $(72 + 18) / 9 = 10$ points

PART 2 • APPLY IT

- $(7 * 12) + 19 = 103$ bridges** Multiply the bridges built by the teams, then add the extra bridges: $7 * 12 = 84$ and $84 + 19 = 103$.
- $81 - (6 * 9) + 27 = 54$ tokens** Find the tokens spent first: $6 * 9 = 54$. Then subtract 54 from 81 and add 27.

CHALLENGE

$(72 + 48) / 8 = 15$ tickets each. The parentheses show that all 120 tickets are combined before they are divided among 8 winners.

Accept equivalent expressions that keep the same order of operations, such as $9 * 8 + 13$ for problem 3. For the challenge, accept a correct explanation that the tickets must be combined before sharing.