

Expression Mission

Substitute values and use order of operations.

GRADE 6 • 6.EE.A

CCSS.Math.Content.6.EE.A "Apply and extend previous understandings of arithmetic to algebraic expressions."

NAME _____

DATE _____

EVALUATE EXPRESSIONS

To evaluate an expression, replace each variable with its given value. Use parentheses to show the substitution, then follow the order of operations. Multiply or divide before you add or subtract.

WORKED EXAMPLE

Evaluate $5m + 4$ when $m = 7$.

1. Replace m with 7: $5(7) + 4$
2. Multiply: $35 + 4$
3. Add: 39

Answer: 39

PRACTICE 6 problems

1 Evaluate $2a + 9$ when $a = 6$.

ANSWER _____

2 Evaluate $18 - b/2$ when $b = 16$.

ANSWER _____

3 Evaluate $6c - 13$ when $c = 9$.

ANSWER _____

4 Evaluate $24/d + 15$ when $d = 2$.

ANSWER _____

5 Evaluate $3(e + 10)$ when $e = 11$.

ANSWER _____

6 Evaluate $f^2 + 14$ when $f = 6$.

ANSWER _____

APPLY IT Show your work

- 1** A game gives 6 gems for each level completed. Leo already has 14 gems and completes 9 levels. Write and evaluate an expression for Leo's total number of gems.

WORK SPACE

ANSWER _____

- 2** In a coding game, a robot earns 8 energy points for each completed mission and spends 19 energy points to unlock a tool. It completes 6 missions. Write and evaluate an expression for the robot's energy points after unlocking the tool.

WORK SPACE

ANSWER _____

CHALLENGE One step up

CHALLENGE

Evaluate $6(2x + 8) - 13$ when $x = 9$.

PART 1 • PRACTICE

#	PROBLEM	ANSWER
1	Evaluate $2a + 9$ when $a = 6$.	21
2	Evaluate $18 - b/2$ when $b = 16$.	10
3	Evaluate $6c - 13$ when $c = 9$.	41
4	Evaluate $24/d + 15$ when $d = 2$.	27
5	Evaluate $3(e + 10)$ when $e = 11$.	63
6	Evaluate $f^2 + 14$ when $f = 6$.	50

PART 2 • APPLY IT

- $6l + 14 = 68$ gems** Let l represent the number of levels. Substitute $l = 9$: $6(9) + 14 = 54 + 14 = 68$.
- $8m - 19 = 29$ energy points** Let m represent the number of missions. Substitute $m = 6$: $8(6) - 19 = 48 - 19 = 29$.

CHALLENGE

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For the word problems, accept any variable letter and an equivalent expression that evaluates to the stated total. In Part 1 and Challenge, accept correct order-of-operations work and the listed numerical value.