LESSON MAKER PRO

Expression Power

Substitute values and simplify with order of operations.

GRADE 6 · MA.6.AR.1

MA.6.AR.1 "Apply previous understanding of arithmetic expressions to algebraic expressions."

NAME _____ DATE _____

EVALUATE EXPRESSIONS

To evaluate an algebraic expression, replace x with its given value. Then use the order of operations, doing parentheses and multiplication or division before addition or subtraction.

WORKED EXAMPLE

Evaluate 4x + 7 when x = 3.

1. Substitute 3 for x: 4(3) + 7
2. Multiply: 12 + 7
3. Add: 19

Answer: 19

PRACTICE 6 problems

1 Evaluate 2x + 5 when x = 6.

ANSWER _____

2 Evaluate 6x - 8 when x = 5.

ANSWER _____

3 Evaluate 20/x + 6 when x = 5.

ANSWER _____

4 Evaluate 5(x + 2) when x = 6.

ANSWER _____

5 Evaluate 26 - 2x when x = 8.

ANSWER _____

6 Evaluate 2x + 5(x - 1) when x = 6.

ANSWER _____

APPLY IT Show your work

1 A music app charges $6 each month plus $2 for each song download. If Riley downloads 8 songs, how much does Riley pay that month?

WORK SPACE

ANSWER _____

2 A game club has 5 packs of card sleeves with x sleeves in each pack, plus 12 loose sleeves. If each pack has 9 sleeves, how many sleeves does the club have?

WORK SPACE

ANSWER _____

CHALLENGE One step up

Evaluate 2(5x - 6) + 8 when x = 6.

WORK SPACE AND ANSWER

ANSWER KEY

Expression Power

GRADE 6 · MA.6.AR.1

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Evaluate 2x + 5 when x = 6.	**17**
2	Evaluate 6x - 8 when x = 5.	**22**
3	Evaluate 20/x + 6 when x = 5.	**10**
4	Evaluate 5(x + 2) when x = 6.	**40**
5	Evaluate 26 - 2x when x = 8.	**10**
6	Evaluate 2x + 5(x - 1) when x = 6.	**37**

PART 2 · APPLY IT

1. **$22** Use 6 + 2x, where x is the number of downloads. Substitute 8: 6 + 2(8) = 22.
2. **57 sleeves** Use 5x + 12, where x is the number of sleeves in each pack. Substitute 9: 5(9) + 12 = 57.

CHALLENGE

56

Accept correct numerical answers with or without shown substitution steps. For the word problems, accept equivalent expressions such as 6 + 2(8) and 5(9) + 12.