

Evaluate Expressions

Lesson 6-2

Name: _____

Date: _____

Class: _____

Key Vocabulary Level 1 support

Picture first, then the word, then a plain-language meaning. Say each word out loud.

In $3x + 5$, x can be any number — if $x = 2$, the expression equals 11; if $x = 10$, it equals 35

Variable

A letter that stands for an unknown number.

$2n + 7$ is an expression: the $2n$ means '2 times some number' and the $+ 7$ means 'then add 7'

Expression

A math phrase with numbers and letters, but no equal sign.

*Evaluate $2n + 7$ when $n = 4$: replace n with 4 →
 $2(4) + 7 = 8 + 7 = 15$*

Evaluate

To find the value by putting numbers in for the letters.

Substitute 3 for x in $5x$: replace x with 3 → $5(3) = 15$

Substitute

To put a number in place of a letter.

*In $7m$, the coefficient 7 tells you to multiply m by 7
— if $m = 3$, then $7m = 21$*

Coefficient

The number in front of a letter, like the 3 in $3x$.

*$4x$ and $2x$ are like terms (both x^1); $4x$ and $4y$ are
NOT (different variables)*

Like terms

Terms with the same letter, like $2x$ and $5x$.

Key Ideas & Notes

- You're a music producer setting up a concert.
- The total cost of the event is given by the expression $150 + 12s$, where s is the number of speakers rented.
- The venue charges \$150 as a base fee, plus \$12 for each speaker.
- How much will it cost for different numbers of speakers?
- Evaluate the expression $150 + 12s$ for each number of speakers.

Think About It

- What does the 150 represent in the expression?
- What does the $12s$ represent?
- What happens to the total cost as s gets bigger?

My Notes

Guided Examples

Example 1

Evaluate $3x + 7$ when $x = 4$.

Solution: $3(4) + 7 = 12 + 7 = 19$.

Answer: A. 19

Example 2

Evaluate $20 - 2n$ when $n = 6$.

Solution: $20 - 2(6) = 20 - 12 = 8$.

Answer: A. 8

Example 3

Which expression means '5 less than twice a number n '?

Solution: Twice n is $2n$. Five less than that is $2n - 5$.

Answer: A. $2n - 5$

Write About the Math

The Writing Revolution

I can explain my steps using the words variable, expression, evaluate, and substitute.

1. Kernel Sentence subject + verb

Model: Expression is a math phrase with numbers and letters, but no equal sign.

Expresión es una frase matemática con números y letras, pero sin signo igual.

Write a kernel sentence about expression. Use a subject and a verb.

Escribe una oración base sobre expresión. Usa un sujeto y un verbo.

2. Sentence Expansion because · but · so

Kernel: Expression matters in math

Expresión importa en matemáticas

Expand the kernel three ways. Add a reason, a contrast, and a result.

because
porque

Expression matters in math because ____.

Expresión importa en matemáticas porque ____.

but
pero

Expression matters in math, but ____.

Expresión importa en matemáticas, pero ____.

so
entonces

Expression matters in math, so ____.

Expresión importa en matemáticas, entonces ____.

3. Sentence Types 4 ways to write a math idea

Statement
Afirmación

Tell one true fact about expression.
Di un hecho verdadero sobre expression.

Expression ____.

Question
Pregunta

Ask a question about expression.
Haz una pregunta sobre expression.

How does ____ ?

¿Cómo ____ ?

Exclamation
Exclamación

Show excitement about expression.
Muestra entusiasmo sobre expression.

Wow, ____ !

¡Guau, ____ !

Command
Mandato

Tell a partner what to do with expression.
Dile a un compañero qué hacer con expression.

First, ____ .

Primero, ____ .

4. Explain Your Reasoning use a sentence starter

First I did ____ **because** ____.

Primero hice ____ *porque* ____.

My answer is ____.

Mi respuesta es ____.

Order matters when ____.

El orden importa cuando ____.

Try It

Solve on your own. Check the answer key when you are done.

1. Which expression means '5 less than twice a number n'?

- A. $2n - 5$
- B. $5 - 2n$
- C. $2(n - 5)$
- D. $2 - 5n$

Show your work:

2. Evaluate $4m + 1$ when $m = 5$.

- A. 21
- B. 20
- C. 9
- D. 25

Show your work:

Stretch Your Thinking

Level 2 enrichment

Challenge task — explain your reasoning in full sentences.

A gym membership costs \$25 per month plus a \$40 signup fee. Write an expression using m for months, then evaluate it for 6 months and 12 months.

Explain what each part of the expression represents.

Sentence starter: The expression is _____. For 6 months: _____ = _____. For 12 months: _____ = _____. The _____ represents the _____ and the _____ represents the _____.

Show your work:

Reflect — Exit Ticket

Evaluate $5(n - 3) + 2$ when $n = 7$.

- A. 22
- B. 32
- C. 17
- D. 36

Your answer:

Answer Key & Teacher Guide

1. **Try It 1:** A. $2n - 5$ — *Twice n is $2n$. Five less than that is $2n - 5$.*

2. **Try It 2:** A. $21 - 4(5) + 1 = 20 + 1 = 21$.

3. **Exit Ticket:** A. $22 - 5(7 - 3) + 2 = 5(4) + 2 = 20 + 2 = 22$.

Writing (TWR) — what to look for

- **Kernel sentence:** A complete sentence needs a subject and a verb. Example: Expression is a math phrase with numbers and letters, but no equal sign.
- **Expansion:** *because* gives a reason, *but* shows a contrast or exception, *so* shows a result. Answers vary; each must keep the kernel idea and add the correct kind of detail.
- **Sentence types:** Statement ends with a period, question with "?", exclamation with "!", and a command starts with an action verb (a "bossy" verb).