Lesson 2 Subtract Integers

English Learner Instructional Strategy

Vocabulary Support: Frontload Academic Vocabulary

Before the lesson, review the meaning of these terms, which students will encounter in word problems: *platform, diving board, diver, surface; temperatures, moon, maximum, minimum, degrees, Celsius, balance, account, bank, charged, fee; sea, surface, range, elevation*. Use photos, realia, and demonstrations to help support understanding. Discuss how many of the words have multiple meanings, and point out the antonyms (*maximum/minimum*) and the word with a homophone (*sea/see*). Ensure students are familiar with the symbol for *degrees* and the abbreviation for *Celsius.* Finally, show students Alabama, Louisiana, New Mexico, California, and Florida on a map of the United States.

English Language Development Leveled Activities

Entering/Emerging	Developing/Expanding	Bridging
Build Background Knowledge Write the integers −3, 7, −8, −10, 9, 2 on the board. Point to the first and say, *This is negative three. What is the* ***opposite*** *of negative three?* **positive three** Invite a volunteer to come to the board and write: **3**. Continue in this manner until all the integers have been addressed. Next, write and say: *5 − (−1).* Then say, *To subtract, I will add the* ***opposite***. Write and say: *5 + 1 = 6.* Continue by writing similar subtraction problems and having students tell you how to simplify them.	**Sentence Frames** Write 5 − (−1) on the board. Read the problem aloud. Then say, *To subtract negative one from positive five, I will add positive one to positive five.* Write: 5 + 1. Then say, *Positive five plus positive one equals positive six.* Continue by writing other subtraction problems on the board and having students tell how to simplify them. Have students use these sentence frames to form their explanations: **To subtract _____ from _____, add _____ to _____. The answer is _____.**	**Number Game** Divide students into pairs, and give each pair two number cubes. Each partner rolls both cubes and then writes a subtraction problem using the two numbers rolled. Each number rolled may be used in the problem as a positive integer or a negative integer. Repeat this process three times. Partners then exchange papers and simplify the problems by changing them into addition problems. Partners check each other's answers.

Multicultural Teacher Tip

ELLs may use an alternative algorithm when solving subtraction problems. For example, Latin American students may have been taught the equal additions method of subtraction instead of the traditional U.S. method of "borrowing" from the column to the left when the top number is less than the bottom number.

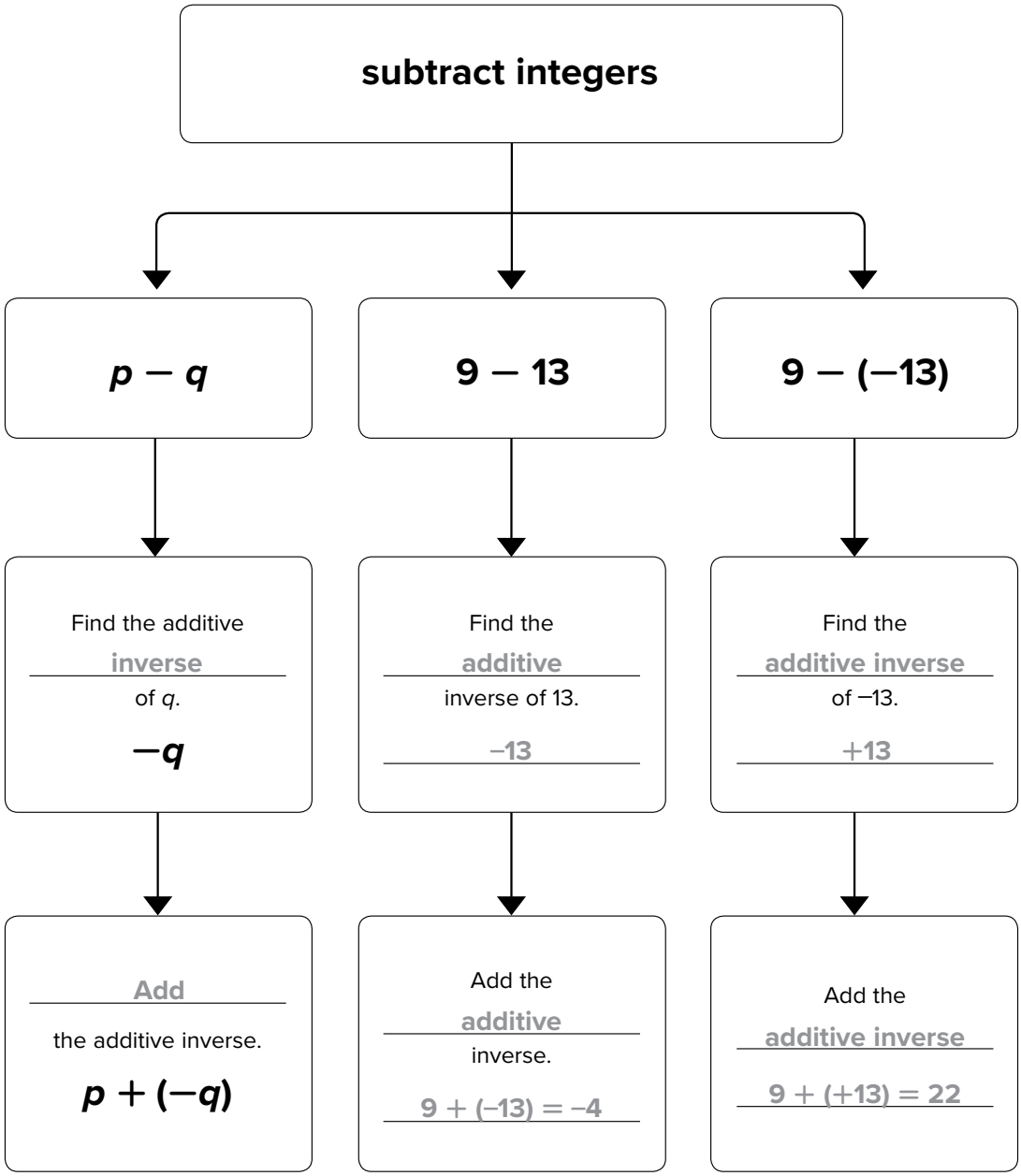
In the equal additions method, a problem such as 35 − 18 solved vertically would start with ten ones added to the top number (15 − 8) and then one ten is added to the bottom number (30 − 20), to get 7 and 10, or 17. Similarly, 432 − 158 would be solved as 12 − 8, 130 − 60, and 400 − 200 (4 + 70 + 200 = 274).

NAME _____ DATE _____ PERIOD _____

Lesson 2 Notetaking

Subtract Integers

Use the flow chart to review the process for subtracting integers.
Sample answers are given.



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