LESSON MAKER PRO

Integer Shortcuts

Reorder, regroup, and add opposites.

GRADE 6 · 6.NS.9d

6.NS.9d "Apply properties of operations as strategies to add and subtract integers."

NAME _____ DATE _____

MAKE HELPFUL PAIRS

To subtract an integer, add its opposite. When adding integers, you can change their order or grouping to put an integer next to its opposite. Opposites add to 0.

WORKED EXAMPLE

Find -14 - 9 + 14.

1. Rewrite subtraction: -14 + (-9) + 14.
2. Reorder and regroup: (-14 + 14) + (-9).
3. Add opposites: 0 + (-9).

Answer: -9

PRACTICE 6 problems

1 Find -8 + 5 + 8. Write the opposite pair you used.

ANSWER _____

_____

2 Find 12 - (-7).

ANSWER _____

3 Find -6 - 11.

ANSWER _____

4 Find -15 + 4 + (-5) + 15.

ANSWER _____

5 Find 18 + (-13) - 18.

ANSWER _____

6 Find -20 - (-3) + (-10).

ANSWER _____

APPLY IT Show your work

1 In a game, Maya loses 16 points, gains 23 points, then gains 16 points. What is her total change in points?

WORK SPACE

ANSWER _____

2 A school club's account balance is -$25 after ordering supplies. The club receives $42 from ticket sales, then pays a $17 fee. What is its final balance?

WORK SPACE

ANSWER _____

CHALLENGE One step up

Find -24 - (-31) + 24 - 7. Explain how changing the order or grouping of the addends helps you solve it.

WORK SPACE AND ANSWER

ANSWER KEY

Integer Shortcuts

GRADE 6 · 6.NS.9d

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Find -8 + 5 + 8. Write the opposite pair you used.	**-8 + 8 = 0; the sum is 5.**
2	Find 12 - (-7).	**19**
3	Find -6 - 11.	**-17**
4	Find -15 + 4 + (-5) + 15.	**-1**
5	Find 18 + (-13) - 18.	**-13**
6	Find -20 - (-3) + (-10).	**-27**

PART 2 · APPLY IT

1. **She gains 23 points overall.** Group the opposite changes: -16 + 23 + 16 = (-16 + 16) + 23 = 23.
2. **$0** The balance is -25 + 42 - 17. Group 42 and -17 to get 25, which cancels -25.

CHALLENGE

24. Rewrite the subtraction as addition, then group -24 and 24 to make 0: (-24 + 24) + 31 + (-7) = 24.

Accept any correct order or grouping of addends in the written explanations. For the game problem, accept +23 points as the total change.