LESSON MAKER PRO

Smart Number Moves

Use properties to make rational-number sums easier.

GRADE 7 · 7.NS.A.1d

CCSS.Math.Content.7.NS.A.1d "Apply properties of operations as strategies to add and subtract rational numbers."

NAME _____ DATE _____

CHOOSE A HELPFUL ORDER

Rewrite subtraction as adding the opposite. Then use the commutative and associative properties to reorder or group numbers that are easy to combine, such as opposites or fractions with a common denominator.

WORKED EXAMPLE

$-17/19 + 6/19 + (-3/19)$

1. Combine the numerators because all fractions have denominator 19.
2. $-17 + 6 + (-3) = -14$.
3. Write the result as $-14/19$.

Answer: -14/19

PRACTICE 6 problems

1 $-8 + 12$

ANSWER _____

2 $9 + (-10)$

ANSWER _____

3 $-1/7 + 8/7$

ANSWER _____

4 $2.4 + (-7.9)$

ANSWER _____

5 $-18 - (-9)$

ANSWER _____

6 $-2/7 + (-4/9) + 2/7$

ANSWER _____

APPLY IT Show your work

1 At an esports tournament, Kai's team gains 12 ranking points in one round, loses 20 points in the next round, and gains 8 points in the last round. What is the total change in ranking points?

WORK SPACE

ANSWER _____

2 Nia's game-wallet balance is $9.50. She makes a $12.75 purchase, and the app allows negative balances. What is her new balance?

WORK SPACE

ANSWER _____

CHALLENGE One step up

Use a helpful order to find -7/10 - (-5/12) + 1/30. Show how you regroup or rewrite the expression.

WORK SPACE AND ANSWER

ANSWER KEY

Smart Number Moves

GRADE 7 · 7.NS.A.1d

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	-8 + 12	**4**
2	9 + (-10)	**-1**
3	-1/7 + 8/7	**1**
4	2.4 + (-7.9)	**-5.5**
5	-18 - (-9)	**-9**
6	-2/7 + (-4/9) + 2/7	**-4/9**

PART 2 · APPLY IT

1. **0 points** Add the gains first: 12 + 8 = 20. Then add the loss: 20 + (-20) = 0.
2. **-$3.25** Rewrite the purchase as adding a negative amount: 9.50 + (-12.75) = -3.25. The negative balance means Nia owes $3.25.

CHALLENGE

-1/4

Accept equivalent rational-number forms, including 0 for the total change in the first word problem. Require simplified fractions for fractional answers unless an equivalent form is requested.