LESSON MAKER PRO

Rational Number Rally

Add, subtract, multiply, and divide signed fractions.

GRADE 7 · 7.NS.A

CCSS.Math.Content.7.NS.A "Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers."

NAME _____ DATE _____

SIGNED FRACTION RULES

For addition and subtraction, rewrite fractions with a common denominator. For multiplication, multiply straight across and use the sign rules. To divide, multiply by the reciprocal of the second number.

WORKED EXAMPLE

-17/19 + 5/19

1. The denominators already match.
2. Add the numerators: (-17 + 5)/19.
3. Simplify: -12/19.

Answer: -12/19

PRACTICE 6 problems

1 -2/9 + 4/9

ANSWER _____

2 13/18 - (-1/6)

ANSWER _____

3 (-4/11) x (-22/15)

ANSWER _____

4 (-7/13) / (14/9)

ANSWER _____

5 -3 2/7 + 2 1/3

ANSWER _____

6 -3/10 - 1/4

ANSWER _____

APPLY IT Show your work

1 During three rounds of an online game, Jada earns -3 1/2 points, then 7/8 point, then -1 1/4 points. What is her total point change?

WORK SPACE

ANSWER _____

2 A phone battery meter changes by -2/7 of a percentage point each hour while a game is running. The game runs for 3 1/2 hours. What is the total change in the battery meter?

WORK SPACE

ANSWER _____

CHALLENGE One step up

Evaluate: (-2/3 + 7/9) / (-3/8)

WORK SPACE AND ANSWER

ANSWER KEY

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PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	-2/9 + 4/9	**2/9**
2	13/18 - (-1/6)	**8/9**
3	(-4/11) x (-22/15)	**8/15**
4	(-7/13) / (14/9)	**-9/26**
5	-3 2/7 + 2 1/3	**-20/21**
6	-3/10 - 1/4	**-11/20**

PART 2 · APPLY IT

1. **-3 7/8 points** Add the signed scores: -3 1/2 + 7/8 - 1 1/4 = -31/8. Rewrite -31/8 as -3 7/8.
2. **-1 percentage point** Multiply the hourly change by the time: (-2/7) x (7/2) = -1. The negative result means the battery meter decreases by 1 percentage point.

CHALLENGE

-8/27

Accept equivalent fractions that are correctly simplified or unsimplified unless the student is asked to simplify. For the word problems, accept equivalent descriptions of the negative change or decrease.