LESSON MAKER PRO

Signed Number Moves

Multiply rational numbers and track the signs.

GRADE 7 · 7A.NS.A.8.e

7A.NS.A.8.e "Extend strategies of multiplication to rational numbers to develop rules for multiplying signed numbers, showing that the properties of the operations are preserved."

NAME _____ DATE _____

THE SIGN RULE

Multiply the numbers as if they were positive, then decide the sign. Two factors with the same sign give a positive product. Two factors with different signs give a negative product. The usual multiplication properties still work with signed numbers.

WORKED EXAMPLE

Find $(-13/16) \times 24$.

1. Simplify the positive factors: 24/16 = 3/2.
2. Multiply: 13 × 3/2 = 39/2.
3. The factors have different signs, so the product is negative.

Answer: -39/2

PRACTICE 6 problems

1 Find (-5) × (-4).

ANSWER _____

2 Find (-7/10) × 15.

ANSWER _____

3 Find (-1.5) × (-0.4).

ANSWER _____

4 Find 0 × (-19/11).

ANSWER _____

5 Find (-2/7) × (-5/6).

ANSWER _____

6 Find (-11) × 2 × (-1/2).

ANSWER _____

APPLY IT Show your work

1 In a skateboarding video game, each fall changes your score by -1.25 points. You fall 6 times. What is the total change in your score?

WORK SPACE

ANSWER _____

2 A music app made 3 incorrect charges. Each charge changed your balance by -$2.40. The app reverses all 3 charges. What is the change in your balance from the reversals?

WORK SPACE

ANSWER _____

CHALLENGE One step up

Find (-5/6) × (18 + (-12)) in two ways: first add inside the parentheses, then use the distributive property. Show both calculations.

WORK SPACE AND ANSWER

ANSWER KEY

Signed Number Moves

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PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Find (-5) × (-4).	**20**
2	Find (-7/10) × 15.	**-21/2**
3	Find (-1.5) × (-0.4).	**0.6**
4	Find 0 × (-19/11).	**0**
5	Find (-2/7) × (-5/6).	**5/21**
6	Find (-11) × 2 × (-1/2).	**11**

PART 2 · APPLY IT

1. **-7.5 points** Multiply 6 × (-1.25) to get -7.5 points.
2. **+$7.20** Reversing the 3 charges is (-3) × (-$2.40). The product is +$7.20.

CHALLENGE

Add first: (-5/6) × 6 = -5. Distribute: [(-5/6) × 18] + [(-5/6) × (-12)] = -15 + 10 = -5.

Accept equivalent fractions or decimals for exact products. In the challenge, both calculations must show -5.