

Rational Number Moves

Use all four operations with positive and negative numbers.

GRADE 7 • TEKS 7.3

7.3 "Number and operations. The student applies mathematical process standards to add, subtract, multiply, and divide while solving problems and justifying solutions. The student is expected to: add, subtract, multiply..."

NAME _____

DATE _____

CHOOSE THE OPERATION

To add or subtract fractions, use a common denominator first. To multiply fractions, multiply across and simplify. To divide by a fraction, multiply by its reciprocal, then simplify.

WORKED EXAMPLE

$$(-3/8) \times (16/21)$$

1. Cancel 3 with 21 to make 1 and 7.
2. Cancel 16 with 8 to make 2 and 1.
3. Multiply: $-(1 \times 2)/(1 \times 7) = -2/7$.

Answer: $-2/7$ **PRACTICE** 6 problems

1 $-5/6 + 1/4$

ANSWER _____

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

ANSWER _____

3 $(-11/15) \times (-5/22)$

ANSWER _____

4 $10/14 \div (-5/7)$

ANSWER _____

5 $-1.75 + 0.6$

ANSWER _____

6 $-2.5 \div 0.5$

ANSWER _____

APPLY IT Show your work

- 1** A student game club has a balance of -\$12.50 after buying supplies. The club earns \$18.75 from a snack sale. What is the club's new balance?

WORK SPACE

ANSWER _____

- 2** The art club has $7\frac{1}{2}$ yards of fabric for spirit banners. Each banner needs $\frac{5}{6}$ yard of fabric. How many complete banners can the club make?

WORK SPACE

ANSWER _____

CHALLENGE One step up

Solve: $(-1\frac{1}{4}) \div (\frac{5}{6}) + \frac{7}{9}$. Then explain why you divide before you add.

WORK SPACE AND ANSWER

PART 1 • PRACTICE

#	PROBLEM	ANSWER
1	$-5/6 + 1/4$	-7/12
2	$7/9 - (-4/9)$	11/9 or 1 2/9
3	$(-11/15) \times (-5/22)$	1/6
4	$10/14 \div (-5/7)$	-1
5	$-1.75 + 0.6$	-1.15
6	$-2.5 \div 0.5$	-5

PART 2 • APPLY IT

1. **\$6.25** Add the earnings to the negative balance: $-12.50 + 18.75 = 6.25$.
2. **9 banners** Divide the total fabric by the fabric per banner: $7 \frac{1}{2} \div \frac{5}{6} = 15/2 \times 6/5 = 9$.

CHALLENGE

-13/18. Division is completed before addition because division comes before addition in the order of operations.

Accept equivalent simplified fractions and mixed-number forms where appropriate. For the challenge, accept an explanation that states division is done before addition according to the order of operations.