

Rational Number Missions

Use all four operations to solve fraction and decimal problems.

GRADE 7 • MA.7.NSO.2.3

MA.7.NSO.2.3 "Solve real-world problems involving any of the four operations with rational numbers."

NAME _____

DATE _____

PLAN EACH OPERATION

Use a common denominator before you add or subtract fractions. Keep track of signs, then simplify the result. To divide by a fraction, multiply by its reciprocal.

WORKED EXAMPLE

Evaluate: $-3/8 + 5/12$

1. Find a common denominator: 24.
2. Rewrite: $-3/8 = -9/24$ and $5/12 = 10/24$.
3. Add: $-9/24 + 10/24 = 1/24$.

Answer: $1/24$

PRACTICE 6 problems

1 Evaluate: $-7/10 + 9/14$

ANSWER _____

2 Evaluate: $11/13 - (-2/7)$

ANSWER _____

3 Evaluate: $(-4/9)(-7/11)$

ANSWER _____

4 Evaluate: $(-14/17) / (7/19)$

ANSWER _____

5 Evaluate: $13/18 - 7/9$

ANSWER _____

6 Evaluate: $-11/14 - 2/7$

ANSWER _____

APPLY IT Show your work

- 1** Mina has $9\frac{1}{2}$ minutes of video clips. She removes $2\frac{1}{4}$ minutes, then divides the remaining clips evenly among 7 highlight reels. How many minutes of clips are in each reel?

WORK SPACE

ANSWER _____

- 2** A game store gift card has \$40.00 on it. A monthly game pass costs \$7.25. After paying for 4 months, how much money remains on the gift card?

WORK SPACE

ANSWER _____

CHALLENGE One step up

CHALLENGE

Evaluate: $(-9/11 + 14/17) / (-2/7)$

PART 1 • PRACTICE

#	PROBLEM	ANSWER
1	Evaluate: $-7/10 + 9/14$	-2/35
2	Evaluate: $11/13 - (-2/7)$	103/91
3	Evaluate: $(-4/9)(-7/11)$	28/99
4	Evaluate: $(-14/17) \div (7/19)$	-38/17
5	Evaluate: $13/18 - 7/9$	-1/18
6	Evaluate: $-11/14 - 2/7$	-15/14

PART 2 • APPLY IT

1. **1 1/28 minutes per reel** Subtract first: $9 \frac{1}{2} - 2 \frac{1}{4} = 29/4$. Then divide by 7: $29/4 \div 7 = 29/28 = 1 \frac{1}{28}$.
2. **\$11.00** Multiply the monthly cost by 4: $\$7.25 \times 4 = \29.00 . Subtract $\$29.00$ from $\$40.00$.

CHALLENGE

-7/374

Accept equivalent mixed-number forms for improper-fraction answers, such as $1 \frac{12}{91}$ for $103/91$. Fraction answers should be simplified, and accept \$11 as equivalent to \$11.00.