LESSON MAKER PRO

Balance the Numbers

Work with fractions, decimals, percents, and signed numbers.

GRADE 7 · 7.NOS.A.3

7.NOS.A.3 "Solve multistep problems involving positive and negative rational numbers in any form (i.e., fractions, decimals, percents) using all four operations..."

NAME _____ DATE _____

CHOOSE A USEFUL FORM

Follow the order of operations, and convert fractions, decimals, or percents when it makes the math easier. Keep track of positive and negative signs. Use an estimate to check whether your answer makes sense.

WORKED EXAMPLE

Compute: $(-2.4 + 3/5) \div (-0.3)$

1. Convert 3/5 to 0.6.
2. Add: -2.4 + 0.6 = -1.8.
3. Divide: -1.8 ÷ (-0.3) = 6.

Answer: 6

PRACTICE 6 problems

1 Compute: -3/4 + 1/2 × 5/6

ANSWER _____

2 Compute: (1.25 - 2.75) ÷ (-0.5)

ANSWER _____

3 Compute: -1.2 × (5/4 - 1/2)

ANSWER _____

4 Compute: (-7/8 + 1/4) ÷ 5/16

ANSWER _____

5 Compute: 40% of -15 + 2.5

ANSWER _____

6 Compute: -3.6 ÷ 0.9 - (-25% of 8)

ANSWER _____

APPLY IT Show your work

1 A gaming club has a $24 snack budget. It spends 37.5% of the budget on drinks, then gets a $3.50 refund for returned snacks. The club splits the money left equally among 5 players. How much does each player get?

WORK SPACE

ANSWER _____

2 Your prepaid game account has a balance of -$12.50. You add $20, then buy 3 items that cost $2.25 each. What is your final balance? Make an estimate to check your answer.

WORK SPACE

ANSWER _____

CHALLENGE One step up

A player claims (-1.5 + 25% of 8) ÷ (-1/4) = 2. Is the claim correct? Find the value and explain how you can check it with mental math.

WORK SPACE AND ANSWER

ANSWER KEY

Balance the Numbers

GRADE 7 · 7.NOS.A.3

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Compute: -3/4 + 1/2 × 5/6	**-1/3**
2	Compute: (1.25 - 2.75) ÷ (-0.5)	**3**
3	Compute: -1.2 × (5/4 - 1/2)	**-0.9**
4	Compute: (-7/8 + 1/4) ÷ 5/16	**-2**
5	Compute: 40% of -15 + 2.5	**-3.5**
6	Compute: -3.6 ÷ 0.9 - (-25% of 8)	**-2**

PART 2 · APPLY IT

1. **$3.70** Since 37.5% is 3/8, the club spends $9 on drinks. The money left is ($24 - $9 + $3.50) ÷ 5 = $3.70 per player.
2. **$0.75; an estimate of about $1 supports the answer.** The final balance is -$12.50 + $20 - 3 × $2.25 = $0.75. Estimating with -$13 + $20 - 3 × $2 gives about $1.

CHALLENGE

The claim is incorrect. Since 25% of 8 is 2, the expression is 0.5 ÷ (-1/4) = -2. Mentally, one-half contains two one-fourths, and dividing by a negative gives a negative result.

Accept equivalent exact forms for numerical answers. For the estimate, accept a nearby value supported by reasonable rounding.