



Rational Numbers Operations

Name: _____

Grade: 7 _____

Date: _____

*Add, subtract, multiply, and divide rational numbers (fractions, decimals, negatives).
Show work and reasoning.*

Part 1 · Add & Subtract Rational Numbers ADD/SUB

1. $-8 + 5 =$ _____

2. $\frac{3}{4} + (-\frac{1}{2}) =$ _____

3. $-2.5 + 1.8 =$ _____

4. $\frac{7}{8} - \frac{3}{8} =$ _____

5. $-6 - 9 =$ _____

6. $2.3 - 4.7 =$ _____

Part 2 · Multiply & Divide Rational Numbers MULT/DIV

7. $(-3) \times 4 =$ _____

8. $\frac{2}{3} \times (-9) =$ _____

9. $-5 \times -2 =$ _____

10. $3/4 \div 1/2 =$ _____

11. $-12 \div 3 =$ _____

12. $2.4 \div (-0.6) =$ _____

Part 3 · Mixed Contexts

CONTEXT

13. A bank account starts at \$120, then \$-45 is withdrawn. New balance?

14. A hiker climbs 1,200 m, then descends 450 m. Net change?

15. A temperature drops from 8°C to -5°C . Change?

16. A store sells $3/4$ lb of apples, then returns $1/2$ lb. Net sold?

17. A runner covers -2.5 km, then 1.8 km. Total?

18. A box has -6 marbles, then adds 9. Final count?

Part 4 · Error Analysis

ERROR

19. Error: $-8 + 5 = -13$. Correct & mistake?

(20. Error: $3/4 + (-1/2) = 1/4$. Correct & why?

(21. Error: $-5 \times -2 = -10$. Correct & why?

Part 5 · Challenge & Reflection CHALLENGE

(22. $(-2.5 + 1.8) \times 4 =$ _____

(23. $3/4 \div (-1/2) =$ _____

(24. $2.3 - 4.7 + 3.1 =$ _____

(25. $-6 \times (-9) \div 3 =$ _____

(26. Reflection: Most helpful strategy? _____

Answer Key

1. -3
2. $\frac{1}{4}$
3. -0.7
4. $\frac{1}{2}$
5. -15
6. -2.4
7. -12
8. -6
9. 10
10. $\frac{3}{2}$
11. -4
12. -4
13. 75
14. 750
15. -13
16. $\frac{1}{4}$
17. -0.7
18. 3
19. -3 / added not subtracted
20. $\frac{1}{4}$ / correct, but check sign
21. 10 / negative $\times$ negative = positive
22. -2.8
23. $-\frac{3}{2}$
24. 0.7
25. 18
26. Varies

Accept equivalent forms. Reflection varies.