

Real-World Problems with Rational Numbers

Name: _____

Date: _____

Score: _____ / 18

Quick Review and Helpful Hints

Real problems often mix fractions, decimals, and negative numbers. Read carefully, decide which operation fits (add, subtract, multiply, or divide), and keep track of *signs* and *units* as you work.

▶ **Example:** A diver goes down $\frac{1}{2}$ of 30 ft, then 5 more ft. How far down in all? **Work:** $\frac{1}{2}$ of 30 is 15. Then add the 5 more: $15 + 5$.

★ **Answer:** 20 ft



Choose the operation; track the signs.

◆ Practice Problems

Compute each value.

1. $\frac{1}{2}$ of 30

8. $10 - 0.5$

2. 0.25×80

9. 0.2×50

3. $\frac{3}{4}$ of 20

10. $-6 - 4$

4. $12 + (-5)$

11. $\frac{2}{3}$ of 9

5. $-8 + 3$

12. 1.5×4

6. $2.5 + 1.5$

13. $\frac{3}{4} - \frac{1}{4}$

7. $\frac{1}{2} + \frac{1}{4}$

14. -3×4

◆ Word Problems

15. A recipe needs $\frac{3}{4}$ cup twice. How much in total?

16. The temperature was 5° , then dropped 8° . What is the new temperature?

17. A \$40 item is $\frac{1}{4}$ off. What is the discount amount?

18. You walk 2.5 mi, then 1.5 mi. What is the total distance?



Answer Keys

- | | | |
|------------------------------------|--------------------------------------|---------------------------------------|
| 1. <input type="text" value="15"/> | 7. <input type="text" value="3/4"/> | 13. <input type="text" value="1/2"/> |
| 2. <input type="text" value="20"/> | 8. <input type="text" value="9.5"/> | 14. <input type="text" value="-12"/> |
| 3. <input type="text" value="15"/> | 9. <input type="text" value="10"/> | 15. <input type="text" value="3/2"/> |
| 4. <input type="text" value="7"/> | 10. <input type="text" value="-10"/> | 16. <input type="text" value="-3"/> |
| 5. <input type="text" value="-5"/> | 11. <input type="text" value="6"/> | 17. <input type="text" value="10"/> |
| 6. <input type="text" value="4"/> | 12. <input type="text" value="6"/> | 18. <input type="text" value="4 mi"/> |

Step-by-Step Explanations

1. Start by naming the process: Read what the problem is asking, choose the matching rule, write the setup, and then simplify one step at a time. The setup/work is $\frac{1}{2} \times 30 = 15$. So the final answer is 15.
2. A good way to think about this is: Read what the problem is asking, choose the matching rule, write the setup, and then simplify one step at a time. The setup/work is $0.25 \times 80 = 20$. So the final answer is 20.
3. Step by step: Read what the problem is asking, choose the matching rule, write the setup, and then simplify one step at a time. The setup/work is $\frac{3}{4} \times 20 = 15$. So the final answer is 15.
4. Take it one move at a time: Read what the problem is asking, choose the matching rule, write the setup, and then simplify one step at a time. The setup/work is $12 - 5 = 7$. So the final answer is 7.
5. Start by naming the process: Read what the problem is asking, choose the matching rule, write the setup, and then simplify one step at a time. The setup/work is $-8 + 3 = -5$. So the final answer is -5.
6. A good way to think about this is: Read what the problem is asking, choose the matching rule, write the setup, and then simplify one step at a time. The setup/work is $2.5 + 1.5 = 4$. So the final answer is 4.
7. Step by step: Read what the problem is asking, choose the matching rule, write the setup, and then simplify one step at a time. The setup/work is $\frac{2}{4} + \frac{1}{4} = \frac{3}{4}$. So the final answer is $\frac{3}{4}$.
8. Take it one move at a time: Read what the problem is asking, choose the matching rule, write the setup, and then simplify one step at a time. The setup/work is $10 - 0.5 = 9.5$. So the final answer is 9.5.
9. Start by naming the process: Read what the problem is asking, choose the matching rule, write the setup, and then simplify one step at a time. The setup/work is $0.2 \times 50 = 10$. So the final answer is 10.
10. A good way to think about this is: Read what the problem is asking, choose the matching rule, write the setup, and then simplify one step at a time. The setup/work is $-6 - 4 = -10$. So the final answer is -10.
11. Step by step: Read what the problem is asking, choose the matching rule, write the setup, and then simplify one step at a time. The setup/work is $\frac{2}{3} \times 9 = 6$. So the final answer is 6.
12. Take it one move at a time: Read what the problem is asking, choose the matching rule, write the setup, and then simplify one step at a time. The setup/work is $1.5 \times 4 = 6$. So the final answer is 6.
13. Start by naming the process: Read what the problem is asking, choose the matching rule, write the setup, and then simplify one step at a time. The setup/work is $\frac{3}{4} - \frac{1}{4} = \frac{2}{4} = \frac{1}{2}$. So the final answer is $\frac{1}{2}$.
14. A good way to think about this is: Read what the problem is asking, choose the matching rule, write the setup, and then simplify one step at a time. The setup/work is $-3 \times 4 = -12$. So the final answer is -12.
15. Step by step: Read what the problem is asking, choose the matching rule, write the setup, and then simplify one step at a time. The setup/work is $\frac{3}{4} + \frac{3}{4} = \frac{6}{4} = \frac{3}{2}$ cups. So the final answer is $\frac{3}{2}$.
16. Take it one move at a time: Read what the problem is asking, choose the matching rule, write the setup, and then simplify one step at a time. The setup/work is $5 - 8 = -3$. So the final answer is -3.
17. Start by naming the process: Read what the problem is asking, choose the matching rule, write the setup, and then simplify one step at a time. The setup/work is $\frac{1}{4} \times 40 = 10$. So the final answer is 10.
18. A good way to think about this is: Read what the problem is asking, choose the matching rule, write the setup, and then simplify one step at a time. The setup/work is $2.5 + 1.5 = 4$ mi. So the final answer is 4 mi.



Keep Building FTCE General Knowledge Math Skills

Recommended Effortless Math resources



The Most Comprehensive
FTCE Math
Preparation Bundle

This perfect bundle contains

- ✓ FTCE Math for Beginners 2026
- ✓ FTCE Math Practice Workbook 2026
- ✓ FTCE Math Full Study Guide 2024-2025
- ✓ FTCE Math in 10 Days!

Visit www.EffortlessMath.com for Online Math Practice

Reza Nazari

The Most Comprehensive FTCE Math Preparation Bundle



Scan Me
Download Instantly

STUDENT FAVORITE - FTCE General Knowledge Math for Beginners



The Ultimate Step by Step Guide
to Preparing for the FTCE General Knowledge Math Test

FTCE 2026
General Knowledge
Math 2026
for
Beginners

Reza Nazari

Recommended by Test Prep Experts

FTCE General Knowledge Math for Beginners 2026

Step-by-step lessons, topic practice, and full review support for students who want a calm path through FTCE General Knowledge Math preparation.

A strong companion for self-study, tutoring, homework, and targeted review.

PDF Edition



Scan Me
Download Instantly