



UM PRINTABLES
PREMIUM EDUCATIONAL RESOURCES

GRADE 7 • CCSS 7.NS.A.1d & 7.NS.A.3

Rational Number Operations

Real-World Multi-Step Word Problem Task Cards

GRADE 7

32 Task Cards • 3 Tiers

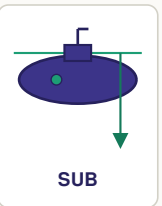
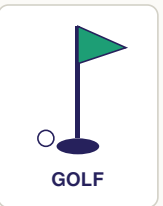
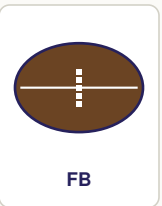
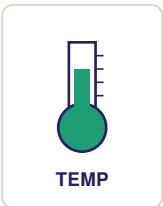
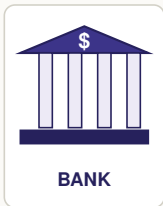
CCSS

7.NS.A.1d
7.NS.A.3

MEGA UNIT

Complete

REAL-WORLD SCENARIOS INSIDE



DIFFERENTIATED INTO 3 TIERS:

M MODIFIED (8 cards)

O ON-LEVEL (16 cards)

C CHALLENGE (8 cards)

Table of Contents

Use this table of contents to navigate the resource. Page numbers are approximate; small variations may occur based on your printer's scaling settings. We recommend printing the entire document once and storing it in a 3-ring binder with tabbed dividers for each major section.

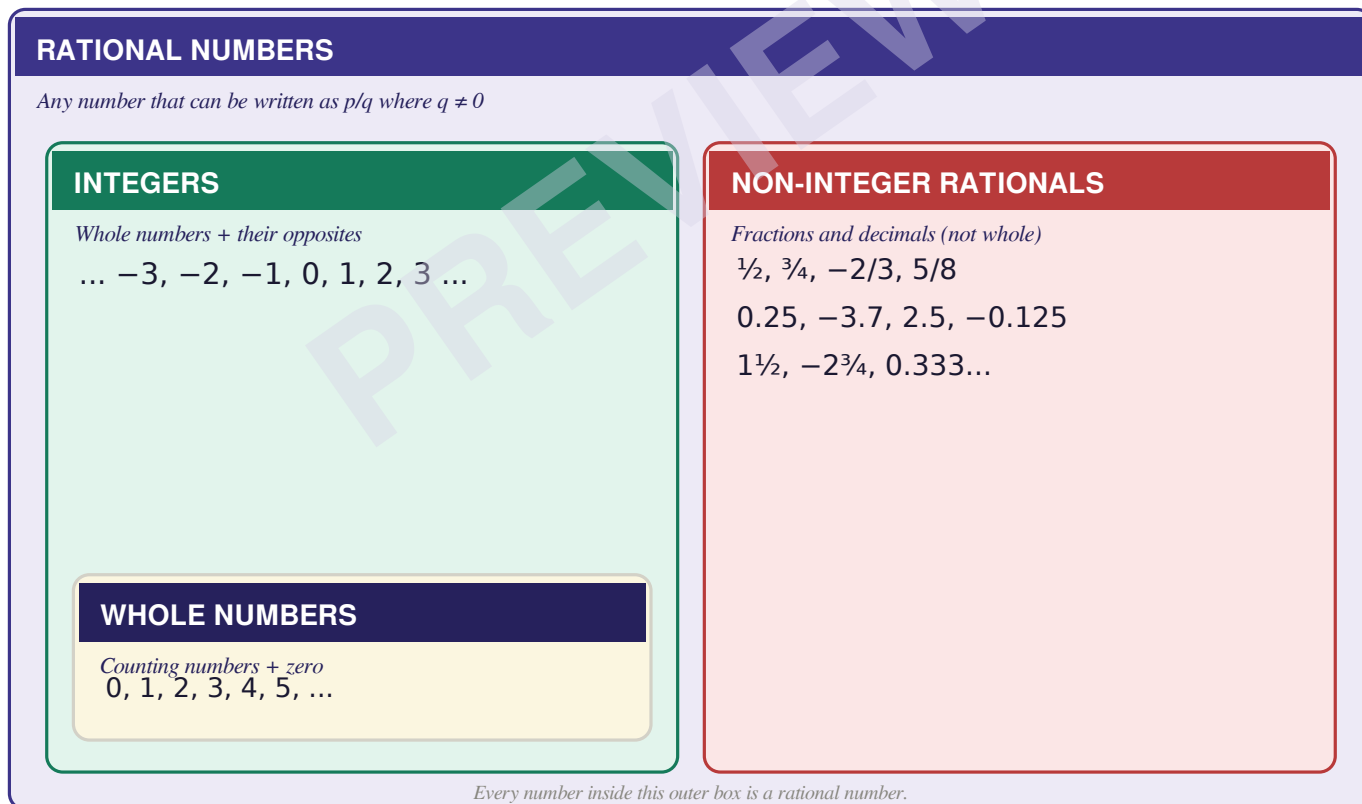
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Topic Refresher — Rational Numbers

Before tackling the task cards, students need a firm grasp of what rational numbers are and how they behave on the number line. This five-page refresher is designed as a student-facing handout — print one per student and use it as a Day-1 warm-up, or project the pages and work through them together. The content assumes students have seen positive fractions, decimals, and integers separately in Grades 4–6 but have not yet synthesized them under the unifying concept of 'rational number.'

What Is a Rational Number?

A **rational number** is any number that can be written as the ratio of two integers — that is, as a fraction p/q where p and q are both integers and q is not zero. The word 'rational' comes from 'ratio,' not from 'reason' — though thinking rationally about these numbers certainly helps. Every integer is a rational number (because $5 = 5/1$, $-3 = -3/1$, $0 = 0/1$), every terminating or repeating decimal is a rational number ($0.25 = 1/4$, $0.333... = 1/3$), and every common fraction is a rational number by definition. Numbers like $\sqrt{2}$ or π are NOT rational because they cannot be expressed as a ratio of two integers — students will meet these 'irrational' numbers in Grade 8.



The diagram above shows the rational-number hierarchy. Notice that whole numbers are a subset of integers, which are a subset of rational numbers. When we operate with rational numbers in this resource, we are working across the entire diagram — adding a negative integer to a positive decimal, multiplying a fraction by a negative integer, and so on. Students often find it comforting to know that all of these numbers follow the SAME rules once you understand how signs work. The rules are not different for fractions versus decimals versus integers — the sign rules apply uniformly across the entire rational-number system.

Task Cards 1–32

Cards are arranged 4 per page. Cut along the dotted lines to separate. Each card has its own tier badge in the upper-right corner: M (teal, Modified), O (purple, On-Level), or C (red, Challenge).

Card 01	MODIFIED	M
BANK ACCOUNT		
Maya's checking account starts the day with a balance of \$80.00. She deposits \$25.50 from babysitting, then later withdraws \$18.75 to buy a movie ticket.		
SOLVE		
What is Maya's new account balance at the end of the day?		
Show your work here		

Card 02	MODIFIED	M
TEMPERATURE		
At 6 a.m. the temperature in Fairbanks was -3°F. By noon it had risen 8°F. By 8 p.m. it had dropped 5°F from the noon reading.		
SOLVE		
What was the temperature at 8 p.m.?		
Show your work here		

Show your work here

O

Show your work here

Show your work here

O

A diagram of a circle with a horizontal diameter and a vertical dashed line passing through the center.

Show your work here

Card 25

CHALLENGE

C

BANK ACCOUNT

Sam's account starts with \$240. He deposits $\frac{1}{3}$ of \$90, withdraws \$45, and then withdraws $\frac{1}{2}$ of the remaining balance.

SOLVE

What is Sam's final account balance?



Show your work here

Card 26

CHALLENGE

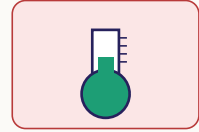
C

TEMPERATURE

Recorded high temperatures ($^{\circ}\text{F}$) Monday–Friday were: -3 , $+2$, -1 , $+4$, -2 .

SOLVE

Find (a) the average daily temperature and (b) the range of temperatures across the 5 days.



Show your work here

Card 27

CHALLENGE

C

ELEVATION

A hiker starts at sea level. She climbs $1\frac{1}{2}$ km, descends $\frac{3}{4}$ km, climbs $\frac{2}{3}$ km, and descends $\frac{1}{6}$ km.

SOLVE

What is the hiker's final elevation? Express as a mixed number in kilometers.



Show your work here

Card 28

CHALLENGE

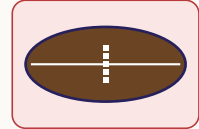
C

FOOTBALL

A team starts a possession on its own 25-yard line. They gain 12 yards, lose 5 yards, and then gain 18 yards on three consecutive plays.

SOLVE

On what yard line does the team end up?



Show your work here

Tier 1 — Modified Recording Sheet

Use this sheet for cards 1–8 (Modified tier). Each box provides workspace for one card. Sentence frames are included below the workspace to scaffold explanation. Write your final answer in the header bar at the top of each box.

Name: _____	Date: _____	Tier: ● M	Score: _____ / 8
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Card 01	Answer: _____	Card 02	Answer: _____
_____		_____	
_____		_____	
_____		_____	
_____		_____	
_____		_____	
_____		_____	
_____		_____	
_____		_____	
First I _____ because _____. Then I _____.		First I _____ because _____. Then I _____.	
Card 03	Answer: _____	Card 04	Answer: _____
_____		_____	
_____		_____	
_____		_____	
_____		_____	
_____		_____	
_____		_____	
_____		_____	
_____		_____	
First I _____ because _____. Then I _____.		First I _____ because _____. Then I _____.	

Part 2: 'I Can' Statements Self-Assessment

After completing the task cards, read each 'I Can' statement below and circle the level that best describes your current mastery. Be honest — the rubric is for YOUR learning, not for a grade. The four levels are: **Not Yet** (I'm still confused), **Getting There** (I can do it with help), **Got It** (I can do it independently), and **Can Teach It** (I can explain it to a classmate). Aim for 'Got It' on all statements by the end of the unit, and 'Can Teach It' on at least three.

#	'I Can' Statement	CCSS	Not Yet	Getting There	Got It	Can Teach It
1	I can identify the sign (positive or negative) of a rational number in a real-world context.	7.NS.A.1d	☐	☐	☐	☐
2	I can add two rational numbers with the SAME sign correctly.	7.NS.A.1d	☐	☐	☐	☐
3	I can add two rational numbers with DIFFERENT signs correctly.	7.NS.A.1d	☐	☐	☐	☐
4	I can subtract a negative number using the Keep-Change-Change rule.	7.NS.A.1d	☐	☐	☐	☐
5	I can multiply two rational numbers and apply the correct sign to the product.	7.NS.A.2	☐	☐	☐	☐
6	I can divide two rational numbers and apply the correct sign to the quotient.	7.NS.A.2	☐	☐	☐	☐
7	I can convert between fractions, decimals, and percentages fluently.	7.NS.A.2d	☐	☐	☐	☐
8	I can decide which operation ($+$ $-$ $\times$ $\div$) to use based on a word problem's context.	7.NS.A.3	☐	☐	☐	☐
9	I can solve a 2-step real-world problem involving rational numbers.	7.NS.A.3	☐	☐	☐	☐
10	I can solve a 3-step real-world problem involving rational numbers.	7.NS.A.3	☐	☐	☐	☐
11	I can solve a 4+ step challenge problem involving rational numbers.	7.NS.A.3	☐	☐	☐	☐
12	I can check my answer by working backward or by estimating reasonableness.	MP1	☐	☐	☐	☐

How to Use the Rubric

Return to this rubric at the end of each week. Compare your current self-ratings to the previous week's ratings — even small movements from 'Not Yet' to 'Getting There' represent real growth. The rubric is most powerful when paired with the card-by-card answer log on p. 44: if you marked 'Got It' on Statement #8 (deciding operations) but missed 4 of the 8 On-Level cards on the answer log, there's a mismatch — you may be over-confident. The teacher can help calibrate.

Complete Answer Key — Worked Solutions

This section provides a complete step-by-step worked solution for each of the 32 task cards. Each solution restates the problem, labels every operation performed at every step, highlights the final answer with units, and includes a verification check. Use this key for grading, for absent students to self-check, or as a parent-handout for at-home support. Accept any mathematically equivalent answer — for example, 0.5 km and $\frac{1}{2}$ km are both correct.

Card 01 — Worked Solution

MODIFIED

BANK ACCOUNT

Problem: Maya's checking account starts the day with a balance of \$80.00. She deposits \$25.50 from babysitting, then later withdraws \$18.75 to buy a movie ticket. What is Maya's new account balance at the end of the day?

Step 1 — Add the deposit: $\$80.00 + \$25.50 = \$105.50$

A deposit increases the balance, so we add.

Step 2 — Subtract the withdrawal: $\$105.50 - \$18.75 = \$86.75$

A withdrawal decreases the balance, so we subtract.

Final Answer: \$86.75 (dollars)

Check: Check: $86.75 + 18.75 - 25.50 = 80.00$ (back to start).

Card 02 — Worked Solution

MODIFIED

TEMPERATURE

Problem: At 6 a.m. the temperature in Fairbanks was -3°F . By noon it had risen 8°F . By 8 p.m. it had dropped 5°F from the noon reading. What was the temperature at 8 p.m.?

Step 1 — Apply the rise: $-3 + 8 = +5^{\circ}\text{F}$ (noon temperature)

Rising means adding a positive number.

Step 2 — Apply the drop: $5 - 5 = 0^{\circ}\text{F}$ (8 p.m. temperature)

Dropping means subtracting.

Final Answer: 0°F (degrees Fahrenheit)

Check: The $+8^{\circ}\text{F}$ and -5°F changes combine to $+3^{\circ}\text{F}$ overall; $-3 + 3 = 0$.

Exit Ticket 1 — Bank & Stock Scenarios

Learning Target

I can solve multi-step real-world problems with rational numbers involving bank balances and stock prices.

CCSS: 7.NS.A.1d, 7.NS.A.3 — Apply properties of operations to add and subtract rational numbers; solve real-world problems with the four operations.

Name: _____	Date: _____	Class: _____	Score: _____ / 2
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Problem 1Show all your work

Tara's bank account starts at \$124.50. She deposits \$35.75, withdraws \$48.20 for groceries, and pays a \$2.00 ATM fee.

What is Tara's final account balance?

Show your work here

Final Answer:

Problem 2Show all your work

Marcus buys 4 shares of stock at \$28.50 each. The price rises \$2.25 per share, then drops \$0.80 per share. He sells all 4 shares.

What is Marcus's profit or loss?

Show your work here

Final Answer:



What's Inside the Full Resource

An 82-page Grade 7 resource built around 32 real-world rational-number task cards.

Page ranges below reflect the actual master PDF.

82 FULL PAGES

32 TASK CARDS

3 TIERS

1 Cover Page pp. 1
Branded title page with Grade 7, CCSS badges, and scenario preview.

2 Copyright & Credits pp. 2-3
Terms of use, credits, acknowledgments, and resource information.

3 Table of Contents pp. 4-5
Section-by-section navigation for the complete 82-page resource.

4 Teacher Notes pp. 6-9
How to use, prep, classroom routines, 5-day pacing, and assessment guidance.

5 Differentiation Guide pp. 10-11
Three readiness tiers, grouping strategies, and ELL/IEP supports.

6 CCSS Alignment Chart pp. 12-13
Card-by-card alignment to applicable Grade 7 Number System standards.

7 Topic Refresher pp. 14-18
Rational-number definitions, number-line concepts, classification, and contexts.

8 Operations Concept Review pp. 19-22
Addition, subtraction, multiplication, and division with worked examples and sign rules.

9 Word-Problem Strategy Guide pp. 23-26
CUBES routine, 5-step process, signal words with caveats, and strategy support.

10 Misconceptions & Error Analysis pp. 27-31
Eight common student errors with examples, fixes, and error-analysis practice.

11 Vocabulary Glossary pp. 32-35
Key rational-number and problem-solving terms with student-friendly definitions.

12 Task Card Section Divider p. 36
Section divider introducing the 32 differentiated task cards.

13 32 Task Cards pp. 37-45
8 Modified + 16 On-Level + 8 Challenge cards, four cards per page.

14 3-Tier Recording Sheets pp. 46-51
Modified sentence frames, On-Level workspace, and Challenge explanation prompts.

15 'I Can' Self-Assessment pp. 52-56
Card-by-card tracking, four-level rubric, and weekly goal-setting reflection.

16 Complete Answer Key pp. 57-72
Step-by-step worked solutions and verification checks for all 32 task cards.

17 3 Exit Tickets + Answer Key pp. 73-81
Three two-problem exit tickets with learning targets and worked solutions.

18 Review Request Page p. 82
Thank-you page with an invitation to review and connect at UMPrintables.com.