A Note to Parents & Teachers

Thank you for supporting your student's learning. This workbook was designed to be flexible — it can be used as homework practice, a summer review, a homeschool spine, or a tutoring resource. Each unit covers grade-level content aligned with common standards for 7th grade.

How the book is organized

- Eight units, each focused on a major area of learning.
- Five-part lesson structure that supports mastery: Mini Lesson → Guided Practice → Independent Practice → Application → Review.
- Mixed question types to develop different cognitive skills.
- End-of-unit reviews and a cumulative final assessment.

Suggested support strategies

- Have your student explain their thinking out loud — verbalizing reinforces understanding.
- Use the answer key as a teaching tool, not just a check. Discuss why an answer is correct.
- Encourage your student to read questions twice before answering.
- Celebrate effort, persistence, and growth — not just correct answers.
- If a topic is challenging, slow down. Re-read the mini lesson and try the guided practice again.

Estimated time commitment

Most students complete one lesson in 20–30 minutes. Working 3–4 days per week, a student can complete the entire workbook in about 12–16 weeks. Adjust the pace to suit your student's needs.

How to Pace Your Workbook

This workbook contains eight units. You can move through them at your own pace, but here is a suggested schedule that works for most students.

Unit	Topic	Suggested Time
1	Math Foundations & Pre-Algebra	3 weeks
2	English Language Arts	3 weeks
3	Science	2 weeks
4	Social Studies	2 weeks
5	Critical Thinking & Logic	1 week
6	Writing & Communication	2 weeks
7	Study Skills & Life Skills	1 week
8	Final Review & Assessment	1–2 weeks

Tips for staying on pace

- Set a regular time of day to work — morning routine, after lunch, or before dinner.
- Choose a workspace with good light and few distractions.
- Aim for 3–5 lessons per week. Consistency beats long sessions.
- Take a short break every 25 minutes. Stretch, drink water, breathe.
- Track your progress weekly — see the next page.

Weekly Learning Tracker

Use this tracker to record what you accomplish each week. Check off the days you worked, write the unit and lesson, and rate how well you understood the material on a 1–5 scale.

Week	Days Worked (M T W T F S S)	Unit / Lesson	Rating (1–5)
Week 1			
Week 2			
Week 3			
Week 4			
Week 5			
Week 6			
Week 7			
Week 8			
Week 9			
Week 10			
Week 11			
Week 12			

Reflection prompt

At the end of each week, take two minutes to ask yourself: What went well? What was hard? What will I focus on next week? Writing your answers — even one sentence — makes a big difference.

UNIT 1

Math Foundations

Numbers, Operations, and Pre-Algebra

In this unit, you will learn to:

- Work confidently with integers, fractions, decimals, and percents.
- Solve ratio and proportional reasoning problems.
- Build and solve expressions, equations, and inequalities.
- Graph points and shapes on the coordinate plane.
- Calculate area, surface area, and volume.
- Analyze data with measures of center and probability.

> **How to use this unit**
>
> Each lesson follows the same five-part structure: Mini Lesson, Guided Practice, Independent Practice, Application & Analysis, and Review Activity.
>
> Read the mini lesson carefully, then try the practice items step-by-step. Don't worry if you get stuck — go back to the mini lesson or ask a teacher or parent for help.
>
> At the end of the unit you will find a review quiz. Use it to check what you have mastered before moving on.

Lesson 1.1 — Integers and Rational Numbers

Mini Lesson

Numbers can be positive or negative. The set of whole numbers and their opposites is called the integers: …−3, −2, −1, 0, 1, 2, 3…

A rational number is any number that can be written as a fraction a/b where a and b are integers and b ≠ 0. Fractions, decimals that terminate or repeat, and all integers are rational.

Key idea — opposites and absolute value

The opposite of a number is the same distance from zero but on the other side of the number line. The opposite of −7 is 7.

The absolute value of a number is its distance from zero. It is always positive or zero. We write it as |−7| = 7.

Rules for operations with integers

- Same signs add → keep the sign: (−4) + (−3) = −7
- Different signs subtract → keep the sign of the larger absolute value: (−9) + 5 = −4
- Subtracting is the same as adding the opposite: 8 − (−3) = 8 + 3 = 11
- Multiplying or dividing same signs → positive; different signs → negative.

Guided Practice

Work through these examples. The first one is done for you.

Example: (−6) + 9 = ? → Different signs, subtract: 9 − 6 = 3. Keep the sign of the larger absolute value (positive 9). Answer: 3.

7. Solve: (−8) + (−5) = _____
8. Solve: 12 − (−4) = _____
9. Solve: (−6) × 7 = _____
10. Solve: (−24) ÷ (−6) = _____

Independent Practice

5. Which expression is equal to −15?

(A) (−9) + 6

(B) (−20) − (−5)

(C) (−3) × 5

(D) (−45) ÷ 3

6. Which of the following is NOT a rational number?

(A) 3/4

(B) −2

(C) 0.333…

(D) √7

7. The opposite of −11 is _____.

8. |−16| = _____.

9. Every integer is a rational number. **T / F**

10. The product of two negative numbers is always negative. **T / F**

Application & Analysis

11. The temperature in the morning was −4°F. By afternoon it had risen 13 degrees. What is the new temperature? Show your work.

12. A submarine is at −85 m below sea level. It descends another 40 m. Write an integer that represents its new depth and explain how you found it.

Review Activity

Order these numbers from least to greatest: −2, 3/4, −0.5, −7/4, 1.2

Lesson 1.2 — Fractions, Decimals, and Percents

Mini Lesson

Fractions, decimals, and percents are three ways of showing the same value. Being able to switch between them is a key 7th-grade skill.

Fraction	Decimal	Percent
1/2	0.50	50%
1/4	0.25	25%
3/4	0.75	75%
1/5	0.20	20%
1/10	0.10	10%
2/3	0.666…	66.6%

Conversion tools

Fraction → Decimal: divide the numerator by the denominator.

Decimal → Percent: multiply by 100 (move the decimal point two places right).

Percent → Decimal: divide by 100 (move the decimal point two places left).

Decimal → Fraction: read the decimal as “tenths,” “hundredths,” etc., then simplify.

Guided Practice

Convert each value to the two missing forms.

Fraction	Decimal	Percent
3/5	_____	_____
_____	0.40	_____
_____	_____	85%
7/8	_____	_____
_____	0.125	_____

Independent Practice

13. Which is equivalent to 3/8?

(A) 0.038

(B) 0.375

(C) 0.83

(D) 3.8

14. Which decimal equals 65%?

(A) 6.5

(B) 0.065

(C) 0.65

(D) 65

15. Order from least to greatest: 0.4, 3/8, 35%

(A) 35%, 0.4, 3/8

(B) 3/8, 35%, 0.4

(C) 0.4, 3/8, 35%

(D) 35%, 3/8, 0.4

16. Write 12% as a fraction in lowest terms: _____.

17. Write 9/20 as a decimal: _____.

18. All terminating decimals can be written as fractions. **T / F**

Application & Analysis

19. A shirt is on sale for 30% off the original price of $40. What is the sale price? Show two different ways to find the answer.

20. Maya scored 18 out of 24 questions correctly on a quiz. Write her score as a fraction in lowest terms, a decimal, and a percent.