Massachusetts MCAS 4th Grade Math Workbook

Comprehensive Practice, Challenging Exercises, and Strategic Guidance for Complete Test-Day Confidence



- Strengthen Every Key Skill
- Sharpen Math Skills the Smart Way
- Essential Practice for Real Growth



Practice Master Achieve

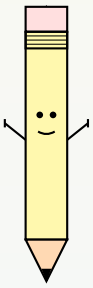
Reza Nazari

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Professor Owl



Pip

with Professor Owl and Pip

Reza Nazari

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★ Massachusetts Sports Teams — Math on the Field! ★

- ★ **Boston Red Sox (MLB Baseball)** — Batting averages, on-base percentages, and ERAs are calculated using **fractions and decimals** — Red Sox fans have loved the math since 1901!
- ★ **New England Patriots (NFL Football)** — Coaches and analysts use **statistics, percentages, and data** to build one of the most successful franchises in NFL history.
- ★ **Boston Celtics (NBA Basketball)** — Sports analysts use **decimals and data** to track player efficiency, defensive ratings, and shooting percentages.
- ★ **Boston Marathon** — The world's oldest annual marathon! Runners and coaches use **decimals, elapsed time, and fractions** to track pace across 26.2 miles.

The math skill? Master **data, decimals, elapsed time, and statistics** — think like a Massachusetts sports champion!



Keep trying!
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★ Massachusetts Careers — Your Math Future is Bright! ★

Massachusetts needs math-smart people in every career!

- ★ **Biotech Scientist (Kendall Square, Cambridge) — Data, fractions, and measurement** to develop the medicines and vaccines used by patients around the world.
- ★ **Software Engineer (Boston Tech Hub) — Patterns, multiplication, and logic** to build the apps and platforms used by millions every day.
- ★ **Marine Biologist — Data, fractions, and graphs** to study whales, cod, and the ocean ecosystems of the North Atlantic.
- ★ **Financial Analyst (Fidelity, State Street) — Large numbers, decimals, and data** to manage trillions of dollars in investments.
- ★ **Robotics Engineer (Boston Dynamics) — Geometry, measurement, and fractions** to design the cutting-edge robots built right here in Massachusetts.

★ The Skills in This Workbook Are Massachusetts's Future! ★

Every worksheet you finish and every problem you solve is building the Massachusetts that tomorrow needs. You are not just learning math — **you are becoming the engineer, the doctor, the coach, the scientist, or the leader** Massachusetts is counting on!

Now let's dive in — Massachusetts is rooting for you! ★

Ready to show what you know? Turn the page and let's get started. Every problem you solve brings you one step closer to an incredible future right here in the great state of Massachusetts!

The Bay State needs ***math champions like you!***

Grade 4 Math Online Center

No logins. No paywalls. Everything in one place.

What's inside:

- Quick-reference lessons aligned to Grade 4 standards
- Printable worksheets for every unit in this book
- Progress trackers and answer keys for families and teachers

How to use it:

1. Open the site and pick the topic you want to practice
2. Download or print the matching worksheet—ready to go
3. After your next test, visit the Quick Check page for your next focus



EffortlessMath.com/grade4

Open 24/7 for learners, families, and teachers

Subtracting Multi-Digit Numbers

Subtract 52,413 − 28,675

	TTh	Th	H	T	O
	5	2	4	1	3
−	2	8	6	7	5
	2	3	7	3	8

Steps to Subtract

1. **Ones**: Can't do $3 - 5$ Regroup: $13 - 5 = 8$
2. **Tens**: Can't do $0 - 7$ Regroup: $10 - 7 = 3$
3. **Hundreds**: $3 - 6$? Regroup! $13 - 6 = 7$
4. Continue left for all places

Answer: 52,413 − 28,675 = 23,738

✎ Practice Questions

Subtract.

1. 67,842 − 34,521 = _____

2. 85,230 − 47,618 = _____

3. 43,005 − 18,267 = _____

4. 90,000 − 36,478 = _____

5. 172,500 − 89,375 = _____

6. 500,000 − 234,167 = _____

Find the missing number.

7. 80,000 − _____ = 45,250

8. _____ − 27,650 = 52,350

9. 150,000 − _____ = 68,425

10. _____ − 145,300 = 254,700

Challenge!

11. A city has 125,400 residents. During the year, 8,375 people moved away and 6,210 new people moved in. What is the new population? _____ residents

12. A warehouse had 500,000 boxes. It shipped 127,850 boxes in week 1 and 98,425 in week 2. Then it received 45,000 new boxes. How many boxes are in the warehouse now?

_____



"Top digit too small? Borrow from your left neighbor! Add 10 to the little guy, pay back 1 to the neighbor—it's like asking a friend for change. "Can I break a ten?" Yes, you can! Regroup and conquer!"



Math master! Scan it!

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Estimating Sums and Differences

Estimating Sums

Estimate: $4{,}723 + 3{,}189$

Round to nearest 1,000:

$5{,}000 + 3{,}000 \approx \mathbf{8{,}000}$

Estimating Differences

Estimate: $8{,}412 - 2{,}678$

Round to nearest 1,000:

$8{,}000 - 3{,}000 \approx \mathbf{5{,}000}$

Steps: 1) Round each number 2) Add or subtract the rounded numbers

✎ Practice Questions

Estimate each sum by rounding to the nearest 1,000.

1. $3{,}412 + 5{,}287 \approx$ _____ **2.** $7{,}650 + 4{,}180 \approx$ _____ **3.** $12{,}345 + 8{,}712 \approx$ _____

Estimate each difference by rounding to the nearest 1,000.

4. $9{,}823 - 4{,}156 \approx$ _____ **5.** $15{,}480 - 7{,}320 \approx$ _____ **6.** $42{,}750 - 18{,}200 \approx$ _____

Estimate by rounding to the nearest 100.

7. $4{,}235 + 2{,}870 \approx$ _____ **8.** $6{,}518 - 2{,}467 \approx$ _____ **9.** $8{,}045 + 3{,}682 \approx$ _____

Estimate, then solve. Is your answer reasonable?

10. $6{,}475 + 3{,}218$

Estimate: _____ Exact: _____

11. $15{,}300 - 8{,}745$

Estimate: _____ Exact: _____

Challenge!

12. Ava has \$8,475. She wants to buy a laptop for \$3,289 and a printer for \$4,150. Estimate to see if she has enough, then find the exact total.

Estimate: _____ Exact: _____

13. A store's weekend sales were \$12,845 on Saturday and \$9,672 on Sunday. Estimate the total sales, then find the exact amount. Estimate: _____ Exact: _____



"Round first, then calculate—like a quick "ballpark" before the real game! If your exact answer is way off from your estimate, something's fishy. Time to double-check. Your estimate is your answer's best friend!"

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Practice more? Scan here!



Word Problems: Addition and Subtraction

Addition Clue Words

in all · total · altogether · sum
combined · both · how many more
(sometimes)

Example: *12,450 fans Saturday, 9,875 Sunday. How many in all?*
$12{,}450 + 9{,}875 = 22{,}325$

Subtraction Clue Words

left · remain · difference · fewer
how many more · take away · less

Example: *Had 45,000 tickets, sold 28,340. How many left?*
$45{,}000 - 28{,}340 = 16{,}660$

✎ Practice Questions

Solve each word problem. Show your work.

1. A factory made 24,560 toys in January and 31,475 toys in February. How many toys were made in both months combined? _____

2. A city library has 85,240 books. The county library has 67,385 books. How many more books does the city library have? _____

3. A school raised $15,250 from a bake sale and $22,480 from a fun run. How much did they raise altogether? _____

4. A store had 42,000 items in stock. They sold 18,725 items during a sale. How many items are left? _____

5. Town A has a population of 56,320. Town B has 43,875. What is the total population of both towns? _____

Challenge!

6. A zoo had 125,600 visitors last year. This year, 18,450 fewer people visited. How many visitors came this year? _____

7. A city has 125,400 residents. During the year, 8,375 people moved away and 6,210 new people moved in. What is the new population? _____ residents



"Word problems are like treasure hunts—the clue words are the X! "Total," "altogether," "in all"? Add! "Left," "remain," "difference"? Subtract! Underline them like a detective. Case closed!"



Math power! Scan now!
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