





TEACHER GUIDE

Includes Student
Worksheets

-  Answer Keys
-  Weekly Lesson Schedule
-  Worksheets
-  Quizzes

7th – 8th Grade

Math

PRINCIPLES OF MATHEMATICS BOOK 2



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Unless otherwise noted, Scripture quotations are from the King James Version of the Bible.

Based on and designed to go with *Principles of Mathematics Student Textbook* (Book 2). Please see the *Student Textbook* for further information and sources.

For the most part, units are based on the official standards given in Tina Butcher, Linda Crown, Rick Harshman, and Juana Williams, eds. *NIST Handbook 44: 97th National Conference on Weights and Measures 2012, 2013 ed.* (Washington: U. S. Department of Commerce, 2012), Appendix C. Found on <http://www.nist.gov/pml/wmd/pubs/h44-13.cfm>, accessed 10/6/2014.

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Problems from the Early 1900s

History...in math? Why not! Throughout the text, we've sprinkled in some math problems from early 1900 math textbooks, often with significant adaptation. The sources are listed here for your reference.

The following problems were adapted from Eugene Henry Barker, *Applied Mathematics for Junior High Schools and High Schools* (Boston: Allyn and Bacon, 1920). Available on Google Books, <http://books.google.com/books?id=-t5EAAAIAAJ&vq=3427&pg=PR2#v=onepage&q&f=false>

Worksheet 2.3, problem 3c; Quiz 1, problems 3a and 5c; Worksheet 5.4, problems 2a and 2b; Quiz 4, problems 1a–1b; Test 1, problem 1a–1b; Worksheet 6.1, problem 2; Worksheet 6.3A, problems 1 and 2; Worksheet 6.3B, problems 1a and 1c; Quiz 5, problem 1c; Worksheet 7.1, problems 4c and 4d; Worksheet 7.2, problem 5; Worksheet 7.3, problem 3; Quiz 6, problem 3; Worksheet 11.6, problems 1a and 1c; Test 2, problem 3d; Worksheet 17.5, problem 4; Worksheet 20.3, problem 5a; Worksheet 21.3C, problem 3

The following problems were adapted from John C. Stone and James F. Millis, *A Secondary Arithmetic: Commercial and Industrial for High, Industrial, Commercial, Normal Schools, and Academies* (Boston: Benj. H. Sanborn & Co., 1908). Available on Google Books, <http://books.google.com/books?id=RtYGAAAAYAAJ&pg=PP1#v=onepage&q&f=false>

Worksheet 1.4, problem 3; Worksheet 3.7, problem 5; Worksheet 5.2, problem 3; Worksheet 5.3, problem 3; Worksheet 5.5, problem 1a; Worksheet 11.6, problem 9; Worksheet 12.1, problem 5; Worksheet 13.4, problems 3b–3c; Worksheet 14.7, problem 2, Quiz 16, problem 4; Worksheet 18.4, problem 6; Worksheet 20.4, problem 3; Worksheet 21.3C, problem 2

This problems were adapted from Joseph Victor Collins, *Practical Algebra: First Year Course* (New York: American Book Co., 1910). Available on Google Books, <http://google.com/books?id=hNdHAAAIAAJ&pg=PP1#v=onepage&q&f=false>

Worksheet 3.2, problem 5b; Worksheet 5.6, problems 6a–6c; Worksheet 7.4, problem 5; Worksheet 9.4, problem 1; Worksheet 10.1, problem 4; Worksheet 10.3, problem 3; Worksheet 11.3, problem 3b–3d; Worksheet 11.4, problem 5c; Worksheet 12.3, Problems 3 and 4

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Preparing to Use the Curriculum

We've tried to streamline everything to make this curriculum as easy to use as possible. Rather than long instructions on how to teach each lesson, the *Student Textbook* contains all the explanation of the material. Important terms are bolded in the textbook so you can easily spot them. Examples you can work through with the student if needed are all included there.

Here are two different suggestions for how to prep the information in this *Teacher Guide*:

- Tear out the schedule, answer key, quizzes, and tests and put them in a binder for you to use as needed, and then hand the student the rest of the guide to work from when instructed.
- Tear out each worksheet as you assign it and hand it to the student, and have them store the completed pages in a binder.

Either way, all the pages are already hole punched for you and ready to go.

The schedule on page 6 explains what to assign each day. This schedule can be adapted to fit your needs. For example, in a classroom setting, several days could be taught at once, with the assignments due at the next class.



Katherine Loop is a homeschool graduate from northern Virginia. Understanding the biblical worldview in math made a tremendous difference in her life and started her on a journey of researching and sharing on the topic. For over a decade now, she's been researching, writing, and speaking on math, along with other topics. Her books on math and a biblical worldview have been used by various Christian colleges, homeschool groups, and individuals. You can connect with her at www.ChristianPerspective.net.

Using This Teacher Guide

Features: The suggested weekly schedule enclosed has easy-to-manage lessons that guide the reading, worksheets, and all assessments. The pages of this guide are perforated and three-hole punched so materials are easy to tear out, hand out, grade, and store. Teachers are encouraged to adjust the schedule and materials as needed in order to best work within their unique educational program.

Lesson Scheduling: Students are instructed to read the pages in their book and then complete the corresponding section provided by the teacher. Assessments that may include worksheets, activities, quizzes, and tests are given at regular intervals, with space to record each grade. Space is provided on the weekly schedule for assignment dates, and flexibility in scheduling is encouraged. Teachers may adapt the scheduled days per each unique student situation. As the student completes each assignment, this can be marked with an “X” in the box.



Approximately 30 to 45 minutes per lesson, four to five days a week



Includes answer keys for worksheets, quizzes, and tests.



Worksheets for each section



Quizzes and tests are included to help reinforce learning and provide assessment opportunities.



Designed for grades 7 to 8 to complete in a one-year course or for older students to use at an accelerated speed.

Course Description

This is Book 2 of a two-book math course designed to give students a firm mathematical foundation, both academically and spiritually. Not only does the curriculum build mathematical thinking and problem-solving skills, it also shows students how a biblical worldview affects our approach to math's various concepts. Students learn to see math, not as an academic exercise, but as a way of exploring and describing consistencies God created and sustains. The worldview is not just an addition to the curriculum, but is the starting point. Science, history, and real life are integrated throughout.

Course Objectives

Students completing this course will:

- Discover how a biblical worldview affects how we view and use math, and how math's very existence points us to a faithful Creator we can trust
- Be equipped to use the math they learn as a useful tool in a wide range of settings, learning to see math as much more than a textbook exercise
- Have a solid foundation for algebra, understanding the core concepts of working with unknowns, equalities, inequalities, functions, and graphing relationships
- Grasp core concepts in statistics and probability, including line graphs and trends, scatter graphs and correlation, stem-and-leaf plots, averages, independent events, dependent events, and the fundamental counting principle
- Work with exponents and square roots, including negative exponents, scientific notation, finding square roots, and the Pythagorean theorem
- Get a glimpse of how math applies in other areas, including trigonometry, sets, and consumer math

Supplies Needed

- *Principles of Mathematics Student Textbook (Book 2)*
- **Binder with Lined Paper** — Students will need to tear out the reference section from this book and put it in the binder, as well as add notes to the binder during the course. They can also use their binder to store their completed worksheets, if desired.
- **Calculator** — Students need a calculator that is able to handle scientific notation; has at least a 10-digit display; and has exponent (y^x), square root ($\sqrt{\quad}$), sine (**SIN**), cosine (**COS**), and tangent (**TAN**) buttons. Graphing calculators should not be used in this course.
- **Graph Paper** — Students will need graph paper to draw coordinate graphs.
- **Ruler** — Students will need a ruler to draw straight lines when graphing.
- **Additional Paper** (if needed) — Students should have extra paper available in case they need more room to complete a problem.
- **Index Cards** (optional)— Making flashcards of definitions or formulas can be a helpful way to learn and review the material. Students are encouraged to use index cards to make flashcards as needed.

Additional Resources and Course Notes

- Please see <http://www.christianperspective.net/math/pom2> for links to helpful online resources, along with additional notes and information related to this course. There is also a way to ask questions there.

Suggested Daily Schedule

(to complete Book 2 in a school year)

Date	Day	Assignment	Due Date	✓	Grade
First Semester—First Quarter					
Week 1	Day 1	Lesson 1.1 (<i>Student Textbook</i> , pages 13–18) Worksheet 1.1 (<i>Teacher Guide</i> , pages 21–22)			
	Day 2	Lesson 1.2 (<i>Student Textbook</i> , pages 18–22) Worksheet 1.2 (<i>Teacher Guide</i> , pages 23–24)			
	Day 3	Lesson 1.3 (<i>Student Textbook</i> , pages 22–24) Worksheet 1.3 (<i>Teacher Guide</i> , pages 25–26)			
	Day 4	Lesson 1.4 (<i>Student Textbook</i> , pages 24–26) Worksheet 1.4 (<i>Teacher Guide</i> , pages 27–28)			
	Day 5	Lesson 1.5–1.6 (<i>Student Textbook</i> , pages 27–31) Worksheet 1.5 (<i>Teacher Guide</i> , pages 29–30)			
Week 2	Day 6	Lesson 2.1 (<i>Student Textbook</i> , pages 33–35) Worksheet 2.1 (<i>Teacher Guide</i> , page 31)			
	Day 7	Lesson 2.2 (<i>Student Textbook</i> , pages 36–38) Worksheet 2.2 (<i>Teacher Guide</i> , pages 33–34)			
	Day 8	Lesson 2.3 (<i>Student Textbook</i> , pages 38–41) Worksheet 2.3 (<i>Teacher Guide</i> , pages 35–36)			
	Day 9	Lesson 2.4 (<i>Student Textbook</i> , pages 41–46) Worksheet 2.4 (<i>Teacher Guide</i> , pages 37–38)			
	Day 10	Lesson 2.5 (<i>Student Textbook</i> , pages 46–52) Worksheet 2.5 (<i>Teacher Guide</i> , pages 39–40)			
Week 3	Day 11	Lesson 2.6 (<i>Student Textbook</i> , pages 53–57) Worksheet 2.6 (<i>Teacher Guide</i> , pages 41–42)			
	Day 12	Lesson 2.7 (<i>Student Textbook</i> , page 58) Study Day			
	Day 13	Quiz 1 (<i>Teacher Guide</i> , pages 309–310)			
	Day 14	Study Day*			
	Day 15	Study Day*			
Week 4	Day 16	Lesson 3.1 (<i>Student Textbook</i> , pages 59–61) Worksheet 3.1 (<i>Teacher Guide</i> , pages 43–44)			
	Day 17	Lesson 3.2 (<i>Student Textbook</i> , pages 61–64) Worksheet 3.2 (<i>Teacher Guide</i> , pages 45–46)			
	Day 18	Lesson 3.3 (<i>Student Textbook</i> , pages 64–68) Worksheet 3.3 (<i>Teacher Guide</i> , pages 47–48)			
	Day 19	Lesson 3.4 (<i>Student Textbook</i> , pages 68–70) Worksheet 3.4 (<i>Teacher Guide</i> , pages 49–50)			
	Day 20	Lesson 3.5 (<i>Student Textbook</i> , pages 70–72) Worksheet 3.5 (<i>Teacher Guide</i> , pages 51–52)			

* Use these study days to spend extra time reviewing any concepts covered in the first two chapters that need more review. The first two chapters reviewed many foundational concepts; it's important to be comfortable with them before continuing.

Suggested Daily Schedule
(to complete Book 2 in a school year)

Date	Day	Assignment	Due Date	✓	Grade
Week 5	Day 21	Lesson 3.6 (<i>Student Textbook</i> , pages 72–75) Worksheet 3.6 (<i>Teacher Guide</i> , pages 53–54)			
	Day 22	Lesson 3.7 (<i>Student Textbook</i> , pages 75–79) Worksheet 3.7 (<i>Teacher Guide</i> , pages 55–56)			
	Day 23	Lesson 3.8 (<i>Student Textbook</i> , pages 79–80) Study Day			
	Day 24	Quiz 2 (<i>Teacher Guide</i> , pages 311–312)			
	Day 25				
Week 6	Day 26	Lesson 4.1 (<i>Student Textbook</i> , pages 81–83) Worksheet 4.1 (<i>Teacher Guide</i> , pages 57–58)			
	Day 27	Lesson 4.2 (<i>Student Textbook</i> , pages 83–86) Worksheet 4.2 (<i>Teacher Guide</i> , pages 59–60)			
	Day 28	Lesson 4.3 (<i>Student Textbook</i> , pages 86–88) Worksheet 4.3 (<i>Teacher Guide</i> , pages 61–62)			
	Day 29	Lesson 4.4 (<i>Student Textbook</i> , pages 89–90) Worksheet 4.4 (<i>Teacher Guide</i> , pages 63–64)			
	Day 30				
Week 7	Day 31	Lesson 4.5 (<i>Student Textbook</i> , pages 91–93) Worksheet 4.5 (<i>Teacher Guide</i> , pages 65–66)			
	Day 32	Lesson 4.6 (<i>Student Textbook</i> , pages 93–94) Study Day			
	Day 33	Quiz 3 (<i>Teacher Guide</i> , pages 313–314)			
	Day 34	Lesson 5.1 (<i>Student Textbook</i> , pages 95–101) Worksheet 5.1A (<i>Teacher Guide</i> , pages 67–68)			
	Day 35	Worksheet 5.1B (<i>Teacher Guide</i> , pages 69–70)			
Week 8	Day 36	Lesson 5.2 (<i>Student Textbook</i> , pages 101–105) Worksheet 5.2 (<i>Teacher Guide</i> , pages 71–72)			
	Day 37	Lesson 5.3 (<i>Student Textbook</i> , pages 106–108) Worksheet 5.3A (<i>Teacher Guide</i> , pages 73–74)			
	Day 38	Worksheet 5.3B (<i>Teacher Guide</i> , pages 75–76)			
	Day 39	Lesson 5.4 (<i>Student Textbook</i> , pages 108–110) Worksheet 5.4 (<i>Teacher Guide</i> , pages 77–78)			
	Day 40	Lesson 5.5 (<i>Student Textbook</i> , pages 111–115) Worksheet 5.5 (<i>Teacher Guide</i> , pages 79–80)			
Week 9	Day 41	Lesson 5.6 (<i>Student Textbook</i> , pages 115–116) Study Day			
	Day 42	Quiz 4 (<i>Teacher Guide</i> , pages 315–316)			
	Day 43	Worksheet 5.6 (<i>Teacher Guide</i> , pages 81–84)			
	Day 44	Study Day			
	Day 45	Test 1 (<i>Teacher Guide</i> , pages 347–348)			

Suggested Daily Schedule
(to complete Book 2 in a school year)

Date	Day	Assignment	Due Date	✓	Grade
First Semester—Second Quarter					
Week 1	Day 46	Lesson 6.1 (<i>Student Textbook</i> , pages 117–120) Worksheet 6.1 (<i>Teacher Guide</i> , pages 85–86)			
	Day 47	Lesson 6.2 (<i>Student Textbook</i> , pages 121–124) Worksheet 6.2A (<i>Teacher Guide</i> , pages 87–88)			
	Day 48	Worksheet 6.2B (<i>Teacher Guide</i> , pages 89–90)			
	Day 49	Lesson 6.3 (<i>Student Textbook</i> , pages 124–128) Worksheet 6.3A (<i>Teacher Guide</i> , pages 91–92)			
	Day 50	Worksheet 6.3B (<i>Teacher Guide</i> , pages 93–94)			
Week 2	Day 51	Lesson 6.4 (<i>Student Textbook</i> , pages 128–130) Worksheet 6.4 (<i>Teacher Guide</i> , pages 95–96)			
	Day 52	Lesson 6.5 (<i>Student Textbook</i> , pages 130–132) Study Day			
	Day 53	Quiz 5 (<i>Teacher Guide</i> , pages 317–318)			
	Day 54	Lesson 7.1 (<i>Student Textbook</i> , pages 133–136) Worksheet 7.1 (<i>Teacher Guide</i> , pages 97–98)			
	Day 55	Lesson 7.2 (<i>Student Textbook</i> , pages 136–139) Worksheet 7.2 (<i>Teacher Guide</i> , pages 99–100)			
Week 3	Day 56	Lesson 7.3 (<i>Student Textbook</i> , pages 140–141) Worksheet 7.3 (<i>Teacher Guide</i> , pages 101–102)			
	Day 57	Lesson 7.4 (<i>Student Textbook</i> , pages 141–143) Worksheet 7.4 (<i>Teacher Guide</i> , pages 103–104)			
	Day 58	Lesson 7.5 (<i>Student Textbook</i> , pages 143–145) Worksheet 7.5 (<i>Teacher Guide</i> , pages 105–106)			
	Day 59	Quiz 6 (<i>Teacher Guide</i> , page 319)			
	Day 60	Lesson 8.1 (<i>Student Textbook</i> , pages 147–149) Worksheet 8.1 (<i>Teacher Guide</i> , pages 107)			
Week 4	Day 61	Lesson 8.2 (<i>Student Textbook</i> , pages 149–150) Worksheet 8.2 (<i>Teacher Guide</i> , pages 109–110)			
	Day 62	Lesson 8.3 (<i>Student Textbook</i> , page 151–153) Worksheet 8.3 (<i>Teacher Guide</i> , pages 111–112)			
	Day 63	Lesson 8.4 (<i>Student Textbook</i> , pages 153–155) Worksheet 8.4 (<i>Teacher Guide</i> , pages 113–114)			
	Day 64	Lesson 8.5 (<i>Student Textbook</i> , pages 156–157) Worksheet 8.5 (<i>Teacher Guide</i> , pages 115–116)			
	Day 65	Lesson 8.6 (<i>Student Textbook</i> , page 157) Study Day			

Suggested Daily Schedule
(to complete Book 2 in a school year)

Date	Day	Assignment	Due Date	✓	Grade
Week 5	Day 66	Quiz 7 (<i>Teacher Guide</i> , page 321)			
	Day 67	Lesson 9.1 (<i>Student Textbook</i> , pages 159–162) Worksheet 9.1 (<i>Teacher Guide</i> , pages 117–118)			
	Day 68	Lesson 9.2 (<i>Student Textbook</i> , pages 162–167) Worksheet 9.2 (<i>Teacher Guide</i> , pages 119–120)			
	Day 69	Lesson 9.3 (<i>Student Textbook</i> , pages 167–169) Worksheet 9.3 (<i>Teacher Guide</i> , pages 121–122)			
	Day 70				
Week 6	Day 71	Lesson 9.4 (<i>Student Textbook</i> , pages 169–172) Worksheet 9.4 (<i>Teacher Guide</i> , pages 123–124)			
	Day 72	Lesson 9.5 (<i>Student Textbook</i> , pages 172–175) Worksheet 9.5 (<i>Teacher Guide</i> , pages 125–126)			
	Day 73	Lesson 9.6 (<i>Student Textbook</i> , page 176) Study Day			
	Day 74	Quiz 8 (<i>Teacher Guide</i> , pages 323–324)			
	Day 75	Lesson 10.1 (<i>Student Textbook</i> , pages 177–179) Worksheet 10.1 (<i>Teacher Guide</i> , pages 127–128)			
Week 7	Day 76	Lesson 10.2 (<i>Student Textbook</i> , pages 179–180) Worksheet 10.2 (<i>Teacher Guide</i> , pages 129–130)			
	Day 77	Lesson 10.3 (<i>Student Textbook</i> , pages 180–182) Worksheet 10.3 (<i>Teacher Guide</i> , pages 131–132)			
	Day 78	Lesson 10.4 (<i>Student Textbook</i> , pages 182–186) Worksheet 10.4 (<i>Teacher Guide</i> , pages 133–134)			
	Day 79	Lesson 10.5 (<i>Student Textbook</i> , pages 186–189) Worksheet 10.5 (<i>Teacher Guide</i> , pages 135)			
	Day 80	Quiz 9 (<i>Teacher Guide</i> , pages 325–326)			
Week 8	Day 81	Lesson 11.1 (<i>Student Textbook</i> , pages 189–194) Worksheet 11.1 (<i>Teacher Guide</i> , pages 137–138)			
	Day 82	Lesson 11.2 (<i>Student Textbook</i> , pages 194–199) Worksheet 11.2 (<i>Teacher Guide</i> , page 139–140)			
	Day 83	Lesson 11.3 (<i>Student Textbook</i> , pages 199–201) Worksheet 11.3 (<i>Teacher Guide</i> , pages 141–142)			
	Day 84	Lesson 11.4 (<i>Student Textbook</i> , pages 201–203) Worksheet 11.4 (<i>Teacher Guide</i> , pages 143–144)			
	Day 85	Lesson 11.5 (<i>Student Textbook</i> , pages 204–208) Worksheet 11.5 (<i>Teacher Guide</i> , pages 145–148)			
Week 9	Day 86	Lesson 11.6 (<i>Student Textbook</i> , pages 208–209) Study Day			
	Day 87	Quiz 10 (<i>Teacher Guide</i> , page 327)*			
	Day 88	Worksheet 11.6 (<i>Teacher Guide</i> , pages 149–152)			
	Day 89	Study Day			
	Day 90	Test 2 (<i>Teacher Guide</i> , pages 349–350)			
		Midterm Grade			

* Quiz 10 gives students the assignment to write a one to three paragraph analysis of a real-life use of statistics.

Suggested Daily Schedule
(to complete Book 2 in a school year)

Date	Day	Assignment	Due Date	✓	Grade
Second Semester—Third Quarter					
Week 1	Day 91	Lesson 12.1 (<i>Student Textbook</i> , pages 211–213) Worksheet 12.1* (<i>Teacher Guide</i> , pages 153–154)			
	Day 92	Lesson 12.2 (<i>Student Textbook</i> , pages 213–216) Worksheet 12.2 (<i>Teacher Guide</i> , pages 155–156)			
	Day 93	Lesson 12.3 (<i>Student Textbook</i> , pages 216–218) Worksheet 12.3 (<i>Teacher Guide</i> , pages 157–158)			
	Day 94	Lesson 12.4 (<i>Student Textbook</i> , pages 218–222) Worksheet 12.4 (<i>Teacher Guide</i> , pages 159–160)			
	Day 95	Lesson 12.5 (<i>Student Textbook</i> , pages 222–225) Worksheet 12.5 (<i>Teacher Guide</i> , pages 161–162)			
Week 2	Day 96	Lesson 12.6 (<i>Student Textbook</i> , pages 225–227) Worksheet 12.6 (<i>Teacher Guide</i> , pages 163–164)			
	Day 97	Lesson 12.7 (<i>Student Textbook</i> , pages 228–232) Worksheet 12.7 (<i>Teacher Guide</i> , pages 165–166)*			
	Day 98	Lesson 12.8 (<i>Student Textbook</i> , pages 233–234) Study Day			
	Day 99	Quiz 11 (<i>Student Textbook</i> , pages 329–330)			
	Day 100	Lesson 13.1 (<i>Student Textbook</i> , pages 235–238) Worksheet 13.1 (<i>Teacher Guide</i> , pages 167–168)			
Week 3	Day 101	Lesson 13.2 (<i>Student Textbook</i> , pages 238–241) Worksheet 13.2 (<i>Teacher Guide</i> , pages 169–171)			
	Day 102	Lesson 13.3 (<i>Student Textbook</i> , pages 241–243) Worksheet 13.3 (<i>Teacher Guide</i> , pages 173–174)			
	Day 103	Lesson 13.4 (<i>Student Textbook</i> , pages 243–245) Worksheet 13.4 (<i>Teacher Guide</i> , pages 175–178)			
	Day 104	Lesson 13.5 (<i>Student Textbook</i> , pages 245–247) Worksheet 13.5 (<i>Teacher Guide</i> , pages 179–180)			
	Day 105	Lesson 13.6 (<i>Student Textbook</i> , page 247) Study Day			
Week 4	Day 106	Quiz 12 (<i>Teacher Guide</i> , pages 331–332)			
	Day 107	Lesson 14.1 (<i>Student Textbook</i> , pages 249–254) Worksheet 14.1 (<i>Teacher Guide</i> , pages 181–183)			
	Day 108	Lesson 14.2 (<i>Student Textbook</i> , pages 254–257) Worksheet 14.2 (<i>Teacher Guide</i> , pages 185–186)			
	Day 109	Lesson 14.3 (<i>Student Textbook</i> , pages 258–260) Worksheet 14.3 (<i>Teacher Guide</i> , pages 187–190)			
	Day 110	Lesson 14.4 (<i>Student Textbook</i> , pages 260–265) Worksheet 14.4 (<i>Teacher Guide</i> , pages 191–192)			

* Worksheet 12.1 includes assignment to toss a coin and roll a die.

* Worksheet 12.7 includes assignment to read or watch one of the suggested videos on genetics and write a paragraph summary.

Suggested Daily Schedule

(to complete Book 2 in a school year)

Date	Day	Assignment	Due Date	✓	Grade
Week 5	Day 111	Lesson 14.5 (<i>Student Textbook</i> , pages 265–270) Worksheet 14.5 (<i>Teacher Guide</i> , pages 193–195)			
	Day 112	Lesson 14.6 (<i>Student Textbook</i> , pages 270–275) Worksheet 14.6 (<i>Teacher Guide</i> , pages 197–200)			
	Day 113	Lesson 14.7 (<i>Student Textbook</i> , pages 275–278) Worksheet 14.7 (<i>Teacher Guide</i> , pages 201–204)			
	Day 114	Lesson 14.8 (<i>Student Textbook</i> , pages 279–280) Quiz 13 (<i>Teacher Guide</i> , pages 333–334)			
	Day 115				
Week 6	Day 116	Lesson 15.1 (<i>Student Textbook</i> , pages 281–285) Worksheet 15.1 (<i>Teacher Guide</i> , pages 205–206)			
	Day 117	Lesson 15.2 (<i>Student Textbook</i> , pages 285–287) Worksheet 15.2 (<i>Teacher Guide</i> , pages 207–208)			
	Day 118	Lesson 15.3 (<i>Student Textbook</i> , pages 287–291) Worksheet 15.3 (<i>Teacher Guide</i> , pages 209–210)			
	Day 119	Lesson 15.4 (<i>Student Textbook</i> , pages 291–292) Worksheet 15.4 (<i>Teacher Guide</i> , pages 211–212)			
	Day 120	Lesson 15.5 (<i>Student Textbook</i> , pages 292–295) Worksheet 15.5 (<i>Teacher Guide</i> , pages 213–214)			
Week 7	Day 121	Lesson 15.6 (<i>Student Textbook</i> , pages 296–298) Worksheet 15.6 (<i>Teacher Guide</i> , pages 215–216)			
	Day 122	Lesson 15.7 (<i>Student Textbook</i> , pages 298–301) Worksheet 15.7 (<i>Teacher Guide</i> , pages 217–218)*			
	Day 123	Lesson 15.8 (<i>Student Textbook</i> , pages 302–303) Quiz 14 (<i>Teacher Guide</i> , pages 335–336)			
	Day 124	Lesson 16.1 (<i>Student Textbook</i> , pages 305–306) Worksheet 16.1 (<i>Teacher Guide</i> , pages 219–220)			
	Day 125	Lesson 16.2 (<i>Student Textbook</i> , pages 306–308) Worksheet 16.2A (<i>Teacher Guide</i> , pages 221–222)			
Week 8	Day 126	Worksheet 16.2B (<i>Teacher Guide</i> , pages 223–224)			
	Day 127	Lesson 16.3 (<i>Student Textbook</i> , pages 308–312) Worksheet 16.3A (<i>Teacher Guide</i> , page 225)			
	Day 128	Worksheet 16.3B (<i>Teacher Guide</i> , pages 227–228)			
	Day 129	Lesson 16.4 (<i>Student Textbook</i> , pages 313–314) Worksheet 16.4 (<i>Teacher Guide</i> , pages 229–330)			
	Day 130	Lesson 16.5 (<i>Student Textbook</i> , pages 314–316) Worksheet 16.5 (<i>Teacher Guide</i> , pages 331–332)			
Week 9	Day 131	Lesson 16.6 (<i>Student Textbook</i> , pages 316–319) Worksheet 16.6 (<i>Teacher Guide</i> , pages 233–234)			
	Day 132	Lesson 16.7 (<i>Student Textbook</i> , pages 319–320) Quiz 15 (<i>Teacher Guide</i> , page 337)			
	Day 133	Worksheet 16.7 (<i>Teacher Guide</i> , pages 235–240)			
	Day 134	Study Day			
	Day 135	Test 3 (<i>Teacher Guide</i> , pages 351–353)			

* Worksheet 15.7 includes assignment to watch suggested video or read suggested article on radiometric dating.

Suggested Daily Schedule
(to complete Book 2 in a school year)

Date	Day	Assignment	Due Date	✓	Grade
Second Semester—Fourth Quarter					
Week 1	Day 136	Lesson 17.1 (<i>Student Textbook</i> , pages 321–323) Worksheet 17.1 (<i>Teacher Guide</i> , page 241)			
	Day 137	Lesson 17.2 (<i>Student Textbook</i> , pages 323–325) Worksheet 17.2 (<i>Teacher Guide</i> , pages 243–244)			
	Day 138	Lesson 17.3 (<i>Student Textbook</i> , pages 325–327) Worksheet 17.3 (<i>Teacher Guide</i> , pages 245)			
	Day 139	Lesson 17.4 (<i>Student Textbook</i> , pages 327–328) Worksheet 17.4 (<i>Teacher Guide</i> , pages 247–248)*			
	Day 140				
Week 2	Day 141	Lesson 17.5 (<i>Student Textbook</i> , pages 328–332) Worksheet 17.5 (<i>Teacher Guide</i> , pages 249–250)			
	Day 142	Lesson 17.6 (<i>Student Textbook</i> , pages 333–334) Worksheet 17.6 (<i>Teacher Guide</i> , pages 251–252)			
	Day 143	Lesson 17.7 (<i>Student Textbook</i> , pages 334–336) Worksheet 17.7 (<i>Teacher Guide</i> , pages 253–254)			
	Day 144	Lesson 17.8 (<i>Student Textbook</i> , pages 336–339) Worksheet 17.8 (<i>Teacher Guide</i> , pages 255–256)			
	Day 145				
Week 3	Day 146	Lesson 17.9 (<i>Student Textbook</i> , pages 339–341) Study Day			
	Day 147	Quiz 16 (<i>Teacher Guide</i> , pages 339–340)			
	Day 148	Lesson 18.1 (<i>Student Textbook</i> , pages 343–347) Worksheet 18.1 (<i>Teacher Guide</i> , pages 257–260)			
	Day 149	Lesson 18.2 (<i>Student Textbook</i> , pages 347–352) Worksheet 18.2 (<i>Teacher Guide</i> , pages 261–262)			
	Day 150				
Week 4	Day 151	Lesson 18.3 (<i>Student Textbook</i> , pages 352–354) Worksheet 18.3 (<i>Teacher Guide</i> , pages 263–265)			
	Day 152	Lesson 18.4 (<i>Student Textbook</i> , pages 354–357) Worksheet 18.4 (<i>Teacher Guide</i> , pages 267–268)			
	Day 153	Lesson 18.5 (<i>Student Textbook</i> , pages 357–363) Worksheet 18.5 (<i>Teacher Guide</i> , pages 269)			
	Day 154	Quiz 17 (<i>Teacher Guide</i> , page 341)			
	Day 155	Lesson 19.1 (<i>Student Textbook</i> , pages 365–367) Worksheet 19.1 (<i>Teacher Guide</i> , pages 271–272)			

* Worksheet 17.4 includes assignment to research the history of a calculator.

Suggested Daily Schedule
(to complete Book 2 in a school year)

Date	Day	Assignment	Due Date	✓	Grade
Week 5	Day 156	Lesson 19.2 (<i>Student Textbook</i> , pages 367–369) Worksheet 19.2 (<i>Teacher Guide</i> , pages 273–274)			
	Day 157	Lesson 19.3 (<i>Student Textbook</i> , pages 369–371) Worksheet 19.3 (<i>Teacher Guide</i> , pages 275–276)*			
	Day 158	Lesson 19.4 (<i>Student Textbook</i> , pages 371–374) Worksheet 19.4 (<i>Teacher Guide</i> , pages 277–278)*			
	Day 159	Lesson 19.5 (<i>Student Textbook</i> , pages 374–375) Worksheet 19.5* (<i>Teacher Guide</i> , page 279)			
	Day 160	Quiz 18 (<i>Teacher Guide</i> , page 343)			
Week 6	Day 161	Lesson 20.1 (<i>Student Textbook</i> , pages 377–380) Worksheet 20.1 (<i>Teacher Guide</i> , pages 281–282)			
	Day 162	Lesson 20.2 (<i>Student Textbook</i> , pages 380–383) Worksheet 20.2 (<i>Teacher Guide</i> , pages 283–284)			
	Day 163	Lesson 20.3 (<i>Student Textbook</i> , pages 383–385) Worksheet 20.3 (<i>Teacher Guide</i> , pages 285–286)			
	Day 164	Lesson 20.4 (<i>Student Textbook</i> , pages 385–388) Worksheet 20.4 (<i>Teacher Guide</i> , pages 287–288)			
	Day 165				
Week 7	Day 166	Lesson 20.5 (<i>Student Textbook</i> , page 388) Study Day			
	Day 167	Quiz 19 (<i>Teacher Guide</i> , page 345)			
	Day 168	Worksheet 20.5 (<i>Teacher Guide</i> , pages 289–292)			
	Day 169	Study Day			
	Day 170	Test 4 (<i>Teacher Guide</i> , pages 355–356)			
Week 8	Day 171	Lesson 21.1 (<i>Student Textbook</i> , pages 389–390) Worksheet 21.1 (<i>Teacher Guide</i> , pages 293–294)* (Project Assigned)			
	Day 172	Lesson 21.2 (<i>Student Textbook</i> , pages 390–391) Worksheet 21.2 (<i>Teacher Guide</i> , pages 295–296)			
	Day 173	Lesson 21.3 (<i>Student Textbook</i> , pages 391–392) Worksheet 21.3A (<i>Teacher Guide</i> , pages 297–298)			
	Day 174	Work on Project			
	Day 175	Worksheet 21.3B (<i>Teacher Guide</i> , pages 299–300)			
Week 9	Day 176	Work on Project			
	Day 177	Worksheet 21.3C (<i>Teacher Guide</i> , pages 301–302)			
	Day 178	Study Day			
	Day 179	Study Day			
	Day 180	Test 5 (Final) (<i>Teacher Guide</i> , pages 357–360) Project Due			
		Final Grade			

* Worksheet 19.3 includes optional assignment to play notes on a piano.

* Worksheet 19.5 includes assignment involving an Internet search.

* End-of-the-year project includes hands-on assignment to either put together a budget for a vacation or explore different savings accounts.

Suggested Accelerated Daily Schedule

(to complete Book 2 in a semester)

This schedule assumes students finished the material covered in Book 1 in the previous semester. Many lessons in the first two chapters that review those foundational concepts have been skipped. If your student has not recently finished Book 1, you will need to have them read the entire first two chapters before beginning, as an understanding of the concepts covered there is crucial.

On days students are completing multiple worksheets, you may wish to assign students only some of each type of problem (especially if the problems are mainly review), assigning additional problems only if the student gets problems incorrect.

Date	Day	Assignment	Due Date	✓	Grade
First Semester—First Quarter					
Week 1	Day 1	Lessons 1.1, 2.1, 2.4 (<i>Student Textbook</i> , pages 13–18, 33–35, 41–46) Worksheets 1.1, 2.1, 2.4 (<i>Teacher Guide</i> , pages 21–22, 31, 37–38)			
	Day 2	Lessons 2.5–2.7 (<i>Student Textbook</i> , pages 46–58) Worksheets 2.5–2.6 (<i>Teacher Guide</i> , pages 39–42)			
	Day 3	Quiz 1 (<i>Teacher Guide</i> , pages 309–310) Study Day*			
	Day 4	Lessons 3.1–3.2 (<i>Student Textbook</i> , pages 59–64) Worksheets 3.1–3.2 (<i>Teacher Guide</i> , pages 43–46)			
	Day 5	Lessons 3.3–3.4 (<i>Student Textbook</i> , pages 64–70) Worksheets 3.3–3.4 (<i>Teacher Guide</i> , pages 47–50)			
Week 2	Day 6	Lessons 3.5–3.6 (<i>Student Textbook</i> , pages 70–75) Worksheets 3.5–3.6 (<i>Teacher Guide</i> , pages 51–54)			
	Day 7	Lessons 3.7–3.8 (<i>Student Textbook</i> , pages 75–80) Worksheet 3.7 (<i>Teacher Guide</i> , pages 55–56) Quiz 2 (<i>Teacher Guide</i> , pages 311–312)			
	Day 8	Lessons 4.1–4.2 (<i>Student Textbook</i> , pages 81–86) Worksheets 4.1–4.2 (<i>Teacher Guide</i> , pages 57–60)			
	Day 9	Lesson 4.3 (<i>Student Textbook</i> , pages 86–88) Worksheet 4.3 (<i>Teacher Guide</i> , pages 61–62)			
	Day 10	Lesson 4.4 (<i>Student Textbook</i> , pages 89–90) Worksheet 4.4 (<i>Teacher Guide</i> , pages 63–64)			

* Use this study day to spend extra time reviewing any concepts covered in the first two chapters that need more review. The first two chapters reviewed many foundational concepts; it's important to be comfortable with them before continuing.

Suggested Accelerated Daily Schedule

(to complete Book 2 in a semester)

Date	Day	Assignment	Due Date	✓	Grade
Week 3	Day 11	Lessons 4.5–4.6 (<i>Student Textbook</i> , pages 91–94) Worksheet 4.5 (<i>Teacher Guide</i> , pages 65–66) Quiz 3 (<i>Teacher Guide</i> , pages 313–314)			
	Day 12	Lesson 5.1 (<i>Student Textbook</i> , pages 95–101) Worksheets 5.1A–5.1B (<i>Teacher Guide</i> , pages 67–70)			
	Day 13	Lesson 5.2 (<i>Student Textbook</i> , pages 101–105) Worksheet 5.2 (<i>Teacher Guide</i> , pages 71–72)*			
	Day 14	Lesson 5.3 (<i>Student Textbook</i> , pages 106–108) Worksheets 5.3A–5.3B (<i>Teacher Guide</i> , pages 73–76)			
	Day 15	Lessons 5.4–5.5 (<i>Student Textbook</i> , pages 108–115) Worksheets 5.4–5.5 (<i>Teacher Guide</i> , pages 77–80)			
Week 4	Day 16	Lesson 5.6 (<i>Student Textbook</i> , pages 115–116) Quiz 4 (<i>Teacher Guide</i> , pages 315–316)			
	Day 17	Worksheet 5.6 (<i>Student Textbook</i> , page 81–84) Study Day			
	Day 18	Test 1 (<i>Teacher Guide</i> , pages 347–348)			
	Day 19	Lessons 6.1–6.2 (<i>Student Textbook</i> , page 117–124) Worksheets 6.1–6.2B (<i>Teacher Guide</i> , pages 85–90)			
	Day 20	Lesson 6.3 (<i>Student Textbook</i> , pages 124–128) Worksheet 6.3A (<i>Teacher Guide</i> , pages 91–92)			
Week 5	Day 21	Lesson 6.4 (<i>Student Textbook</i> , pages 128–130) Worksheets 6.3B–6.4 (<i>Teacher Guide</i> , pages 93–96)			
	Day 22	Lesson 6.5 (<i>Student Textbook</i> , pages 130–132) Quiz 5 (<i>Teacher Guide</i> , pages 317–318)			
	Day 23	Lesson 7.1 (<i>Student Textbook</i> , pages 133–136) Worksheet 7.1 (<i>Teacher Guide</i> , pages 97–98)			
	Day 24	Lessons 7.2–7.3 (<i>Student Textbook</i> , pages 136–141) Worksheets 7.2–7.3 (<i>Teacher Guide</i> , pages 99–102)			
	Day 25	Lessons 7.4–7.5 (<i>Student Textbook</i> , pages 141–145) Worksheets 7.4–7.5 (<i>Teacher Guide</i> , pages 103–106)			
Week 6	Day 26	Quiz 6 (<i>Teacher Guide</i> , page 319) Lessons 8.1–8.2 (<i>Student Textbook</i> , pages 147–150) Worksheets 8.1–8.2 (<i>Teacher Guide</i> , pages 107–110)			
	Day 27	Lesson 8.3 (<i>Student Textbook</i> , pages 151–153) Worksheet 8.3 (<i>Teacher Guide</i> , pages 111–112)			
	Day 28	Lessons 8.4–8.5 (<i>Student Textbook</i> , pages 153–157) Worksheets 8.4–8.5 (<i>Teacher Guide</i> , pages 113–116)			
	Day 29	Lesson 8.6 (<i>Student Textbook</i> , page 157) Quiz 7 (<i>Teacher Guide</i> , page 321)			
	Day 30	Lessons 9.1–9.2 (<i>Student Textbook</i> , pages 159–167) Worksheets 9.1–9.2 (<i>Teacher Guide</i> , pages 117–120)			

Suggested Accelerated Daily Schedule

(to complete Book 2 in a semester)

Date	Day	Assignment	Due Date	✓	Grade
Week 7	Day 31	Lessons 9.3–9.4 (<i>Student Textbook</i> , pages 167–172) Worksheets 9.3–9.4 (<i>Teacher Guide</i> , pages 121–124)			
	Day 32	Lessons 9.5–9.6 (<i>Student Textbook</i> , pages 172–176) Worksheet 9.5 (<i>Teacher Guide</i> , pages 125–126) Quiz 8 (<i>Teacher Guide</i> , pages 323–324)			
	Day 33	Lessons 10.1–10.2 (<i>Student Textbook</i> , pages 177–180) Worksheets 10.1–10.2 (<i>Teacher Guide</i> , pages 127–130)			
	Day 34	Lessons 10.3–10.4 (<i>Student Textbook</i> , pages 180–186) Worksheets 10.3–10.4 (<i>Teacher Guide</i> , pages 131–134)			
	Day 35	Quiz 9 (<i>Teacher Guide</i> , pages 325–326) Lessons 10.5–11.1 (<i>Student Textbook</i> , pages 186–194) Worksheets 10.5 (optional)–11.1 (<i>Teacher Guide</i> , pages 135–138)			
Week 8	Day 36	Lessons 11.2–11.3 (<i>Student Textbook</i> , pages 194–201) Worksheets 11.2–11.3 (<i>Teacher Guide</i> , pages 139–142)			
	Day 37	Lessons 11.4–11.5 (<i>Student Textbook</i> , pages 201–208) Worksheets 11.4–11.5 (<i>Teacher Guide</i> , pages 143–148)			
	Day 38	Lesson 11.6 (<i>Student Textbook</i> , pages 208–209) Quiz 10 (<i>Teacher Guide</i> , page 327)*			
	Day 39	Worksheet 11.6 (<i>Teacher Guide</i> , pages 149–152) Study Day			
	Day 40	Test 2 (<i>Teacher Guide</i> , pages 349–350)			
Week 9	Day 41	Lessons 12.1–12.2 (<i>Student Textbook</i> , pages 211–216) Worksheets 12.1–12.2 (<i>Teacher Guide</i> , pages 153–156)*			
	Day 42	Lessons 12.3–12.4 (<i>Student Textbook</i> , pages 216–222) Worksheets 12.3–12.4 (<i>Teacher Guide</i> , pages 157–160)			
	Day 43	Lesson 12.5 (<i>Student Textbook</i> , pages 222–225) Worksheet 12.5 (<i>Teacher Guide</i> , pages 161–162)			
	Day 44	Lesson 12.6 (<i>Student Textbook</i> , pages 225–227) Worksheet 12.6 (<i>Teacher Guide</i> , pages 163–164)			
	Day 45	Lessons 12.7–12.8 (<i>Student Textbook</i> , pages 228–234) Worksheet 12.7 (<i>Teacher Guide</i> , pages 165–166)* Quiz 11 (<i>Teacher Guide</i> , pages 329–330)			
First Semester—Second Quarter					
Week 1	Day 46	Lesson 13.1 (<i>Student Textbook</i> , pages 235–238) Worksheet 13.1 (<i>Teacher Guide</i> , pages 167–168)			
	Day 47	Lessons 13.2–13.3 (<i>Student Textbook</i> , pages 238–243) Worksheets 13.2–13.3 (<i>Teacher Guide</i> , pages 169–174)			
	Day 48	Lesson 13.4 (<i>Student Textbook</i> , pages 243–245) Worksheet 13.4 (<i>Teacher Guide</i> , pages 175–178)			
	Day 49	Lessons 13.5–13.6 (<i>Student Textbook</i> , pages 245–247) Worksheet 13.5 (<i>Teacher Guide</i> , pages 179–180) Quiz 12 (<i>Teacher Guide</i> , pages 331–332)			
	Day 50	Lessons 14.1–14.2 (<i>Student Textbook</i> , pages 249–257) Worksheets 14.1–14.2 (<i>Teacher Guide</i> , pages 181–186)			

* Quiz 10 gives students the assignment to write a one to three paragraph analysis of a real-life use of statistics.

* Worksheet 12.1 includes assignment to toss a coin and roll a die.

* Worksheet 12.7 includes assignment to read or watch one of the suggested videos on genetics and write a paragraph summary.

Suggested Accelerated Daily Schedule

(to complete Book 2 in a semester)

Date	Day	Assignment	Due Date	✓	Grade
Week 2	Day 51	Lessons 14.3–14.4 (<i>Student Textbook</i> , pages 258–265) Worksheets 14.3–14.4 (<i>Teacher Guide</i> , pages 187–192)			
	Day 52	Lesson 14.5 (<i>Student Textbook</i> , pages 265–270) Worksheet 14.5 (<i>Teacher Guide</i> , pages 193–195)			
	Day 53	Lesson 14.6 (<i>Student Textbook</i> , pages 270–275) Worksheet 14.6 (<i>Teacher Guide</i> , pages 197–200)			
	Day 54	Lessons 14.7–14.8 (<i>Student Textbook</i> , pages 275–280) Worksheet 14.7 (<i>Teacher Guide</i> , pages 201–204) Quiz 13 (<i>Teacher Guide</i> , pages 333–334)			
	Day 55	Lessons 15.1–15.2 (<i>Student Textbook</i> , pages 281–287) Worksheets 15.1–15.2 (<i>Teacher Guide</i> , pages 205–208)			
Week 3	Day 56	Lessons 15.3–15.4 (<i>Student Textbook</i> , pages 287–292) Worksheets 15.3–15.4 (<i>Teacher Guide</i> , pages 209–212)			
	Day 57	Lessons 15.5–15.6 (<i>Student Textbook</i> , pages 292–298) Worksheets 15.5–15.6 (<i>Teacher Guide</i> , pages 213–216)			
	Day 58	Lessons 15.7–15.8 (<i>Student Textbook</i> , pages 298–303) Worksheet 15.7 (<i>Teacher Guide</i> , pages 217–218)*			
	Day 59	Quiz 14 (<i>Teacher Guide</i> , pages 335–336); Lesson 16.1 (<i>Student Textbook</i> , pages 305–306) Worksheet 16.1 (<i>Teacher Guide</i> , pages 219–220)			
	Day 60	Lesson 16.2 (<i>Student Textbook</i> , pages 306–308) Worksheets 16.2A– 16.2B (<i>Teacher Guide</i> , pages 221–224)			
Week 4	Day 61	Lesson 16.3 (<i>Student Textbook</i> , pages 308–312) Worksheets 16.3A–16.3B (<i>Teacher Guide</i> , pages 225–228)			
	Day 62	Lessons 16.4–16.5 (<i>Student Textbook</i> , pages 313–316) Worksheets 16.4–16.5 (<i>Teacher Guide</i> , pages 229–332)			
	Day 63	Lessons 16.6–16.7 (<i>Student Textbook</i> , pages 316–320) Worksheet 16.6 (<i>Teacher Guide</i> , pages 233–234)			
	Day 64	Quiz 15 (<i>Teacher Guide</i> , page 337) Worksheet 16.7 (<i>Teacher Guide</i> , pages 235–240)			
	Day 65	Test 3 (<i>Teacher Guide</i> , pages 351–353)			
Week 5	Day 66	Lessons 17.1–17.2 (<i>Student Textbook</i> , pages 321–325) Worksheets 17.1–17.2 (<i>Teacher Guide</i> , pages 241–244)			
	Day 67	Lessons 17.3–17.4 (<i>Student Textbook</i> , pages 325–328) Worksheets 17.3–17.4 (<i>Teacher Guide</i> , pages 245–248)*			
	Day 68	Lesson 17.5 (<i>Student Textbook</i> , pages 328–332) Worksheet 17.5 (<i>Teacher Guide</i> , pages 249–250)			
	Day 69	Lesson 17.6 (<i>Student Textbook</i> , pages 333–334) Worksheet 17.6 (<i>Teacher Guide</i> , pages 251–252)			
	Day 70	Lesson 17.7 (<i>Student Textbook</i> , pages 334–336) Worksheet 17.7 (<i>Teacher Guide</i> , pages 253–254)			

* Worksheet 15.7 includes assignment to watch suggested video or read suggested article on radiometric dating.

* Worksheet 17.4 includes assignment to research the history of a calculator.

Suggested Accelerated Daily Schedule

(to complete Book 2 in a semester)

Date	Day	Assignment	Due Date	✓	Grade
Week 6	Day 71	Lesson 17.8 (<i>Student Textbook</i> , pages 336–339) Worksheet 17.8 (<i>Teacher Guide</i> , pages 255–256)			
	Day 72	Lesson 17.9 (<i>Student Textbook</i> , pages 339–341) Quiz 16 (<i>Teacher Guide</i> , pages 339–340)			
	Day 73	Lesson 18.1 (<i>Student Textbook</i> , page 343–347) Worksheet 18.1 (<i>Teacher Guide</i> , pages 257–260)			
	Day 74	Lesson 18.2 (<i>Student Textbook</i> , pages 347–352) Worksheet 18.2 (<i>Teacher Guide</i> , pages 261–262)			
	Day 75	Lesson 18.3 (<i>Student Textbook</i> , pages 352–354) Worksheet 18.3 (<i>Teacher Guide</i> , pages 263–265)			
Week 7	Day 76	Lessons 18.4–18.5 (<i>Student Textbook</i> , pages 354–363) Worksheets 18.4–18.5 (<i>Teacher Guide</i> , pages 267–269)			
	Day 77	Quiz 17 (<i>Teacher Guide</i> , page 341) Lesson 19.1 (<i>Student Textbook</i> , pages 365–367) Worksheet 19.1 (<i>Teacher Guide</i> , pages 271–272)			
	Day 78	Lesson 19.2 (<i>Student Textbook</i> , pages 367–369) Worksheet 19.2 (<i>Teacher Guide</i> , pages 273–274)			
	Day 79	Lessons 19.3–19.5 (<i>Student Textbook</i> , pages 369–375) Worksheets 19.3–19.5 (<i>Teacher Guide</i> , pages 275–279)*			
	Day 80	Quiz 18 (<i>Teacher Guide</i> , page 343) Lesson 20.1 (<i>Student Textbook</i> , pages 377–380) Worksheet 20.1 (<i>Teacher Guide</i> , pages 281–282)			
Week 8	Day 81	Lesson 20.2 (<i>Student Textbook</i> , pages 380–383) Worksheet 20.2 (<i>Teacher Guide</i> , pages 283–284)			
	Day 82	Lesson 20.3 (<i>Student Textbook</i> , pages 383–385) Worksheet 20.3 (<i>Teacher Guide</i> , pages 285–286)			
	Day 83	Lessons 20.4–20.5 (<i>Student Textbook</i> , pages 385–388) Worksheet 20.4 (<i>Teacher Guide</i> , pages 287–288) Quiz 19 (<i>Teacher Guide</i> , page 345)			
	Day 84	Worksheet 20.5 (<i>Teacher Guide</i> , pages 289–292)			
	Day 85	Test 4 (<i>Teacher Guide</i> , pages 355–356)			
Week 9	Day 86	Lesson 21.1 (<i>Student Textbook</i> , pages 389–390) Worksheet 21.1 (<i>Teacher Guide</i> , page 293–294)* (Project Assigned)			
	Day 87	Lesson 21.2 (<i>Student Textbook</i> , pages 390–391) Worksheet 21.2 (<i>Teacher Guide</i> , pages 295–296) Work on Project			
	Day 88	Lesson 21.3 (<i>Student Textbook</i> , pages 391–392) Worksheet 21.3A (<i>Teacher Guide</i> , pages 297–298) Work on Project			
	Day 89	Worksheets 21.3B–21.3C (<i>Teacher Guide</i> , pages 299–302) Work on Project			
	Day 90	Test 5 (Final) (<i>Teacher Guide</i> , pages 357–360) Project Due			
		Final Grade			

* Worksheet 19.3 includes optional assignment to play notes on a piano.

* Worksheet 19.5 includes assignment involving an Internet search.

* End-of-the-year project includes hands-on assignment to either put together a budget for a vacation or explore different savings accounts.

Worksheets



1. **Notebook and Flashcard Preparation** — Place a copy of the reference sheets (pages 421–436) inside a three-ring binder. Use this “notebook” to **take additional notes as you study** (make sure you have some extra lined paper inside), as well as to store your completed worksheets. Keeping a notebook of key information as you go can help you remember the information and find it easily when needed. You may also find it helpful to use index cards to make flashcards of new terms or concepts, so make sure you have some blank index cards in the front of your binder that you can use.
2. **Flashcard and Notebook Use** — Now that your notebook is prepped, add the definitions for *expression*, *equation*, and *simplify* to it. You may also wish to make flashcards for the terms using index cards. We will not include a reminder about writing in your notebook or making flashcards; however, you’ll save yourself a lot of frustration if you use the notebook, flashcards, or whatever other method works for you to keep track of terms and concepts.
3. **Math in Action** — Name 10 ways math applies outside of a textbook.
 - a.
 - b.
 - c.
 - d.
 - e.
 - f.
 - g.
 - h.
 - i.
 - j.
4. **Worldview Thinking**
 - a. What is a worldview?
 - b. Summarize what math is and why it works.
 - c. As we use math, why do we find both evidence of God’s wisdom and care and evidence of suffering and death?

5. Term Time

- a. Is $5 + 9$ an expression or an equation?

- b. Simplify $5 + 9$

6. “How to Use This Curriculum” — Be sure to read the “How to Use This Curriculum” section (p. 423–424).

- a. When are you allowed to use a calculator in this course?

- b. Round 0.5432 the way it should be rounded if it's the answer to a problem.

- c. Round 0.8975 the way it should be rounded if it's the answer to a problem.

- d. Should you round 0.8975 if it's a number you need to input into your calculator in order to solve a problem?

- e. When should you include a unit of measure in your answer?

- f. List one suggestion given for how to study on study days.



You may use a calculator on this worksheet whenever you see this symbol ().

- 1. Finding Unknowns** — Solve each equation for x (that is, isolate x on a side by itself so as to find its value). Show how you added or subtracted (i.e., added a negative number) the same amount to both sides to isolate x on a side by itself.

Example: $x - 3 = 10$
 $x - 3 + 3 = 10 + 3$
 $x = 13$

a. $x - 7 = 20$

Example Meaning: How many brownies were there before dinner if your family ate 7 brownies after dinner and you have 20 brownies left?



b. $x + 7 = 38$

Example Meaning: How much more do you have to save if you've saved \$7 and your goal is to save \$38?

c. $x + 8 = 26$

d. $x - 98 = 113$

e. $78 + x = 240$

f. $15 + x = 121$

- 2. Checking Your Work** — Go back and check each of the answers you obtained in problem 1 by substituting the value you found for x into the original equation. Does it hold true? Show your work.

For example, we can check the example we showed for problem 1 by substituting the value for x we obtained into the original equation:

$x - 3 = 10$
 $13 - 3 = 10$
 $10 = 10$

a.

b.

c.

d.

e.

f.

3. Understanding the Meaning

- If we were using the equation in problem 1a to solve the example meaning given, what would the x represent?
- If we were using the equation in problem 1b to solve the example meaning given, what would the x represent?
- Write your own example meaning for the problem in 1c.

4. **Challenge Problem** — Solve: $-8 + x = 10$ *Hint:* It doesn't matter that the negative number comes first. This problem means the exact same as $x - 8 = 10$, which we could think of as $x + -8 = 10$.

5. Skill Sharpening — Simplify.

a. $-23 \cdot -45 \cdot -1$

b. $\frac{45}{-5}$

c. $\frac{72}{-8}$

d. $82.5 \cdot -6$

e. $\frac{2}{3} \cdot -\frac{6}{7}$

f. $\frac{5}{3} \div \frac{2}{3}$

g. $\frac{6}{\frac{2}{3}}$

h. $\frac{60 \text{ m}^2}{10 \text{ m}}$

6. Miscellaneous Review (📊)


- In order to earn \$55,670 a year, how much do you need to earn on average each month?
- If you spend \$32.56 on a phone a month, how much do you spend a year?


7. **Fill in the Blanks** — Look at the box on page 65 of your *Student Textbook* to fill in the blanks.

To find an unknown in an equation, _____
_____. Do this by performing the _____ operation using the
_____ to _____ of the equation.




You may use a calculator on this worksheet whenever you see this symbol ().

1. **Under Pressure** () — Use the proportion $\frac{P_1}{P_2} = \frac{V_2}{V_1}$ and cross multiplication to solve these problems.
- 24 cubic inches (V_1) of air under a pressure of 40 pounds (P_1) will have what volume when the pressure is increased to 100 pounds (P_2), assuming the temperature remains the same?

 - 15 cubic yards (V_1) of air under a pressure of 35 pounds (P_1) will have what volume when the pressure is decreased to 10 pounds (P_2), assuming the temperature remains the same?
2. **Looking at Proportions** ()
- If the fall in a barometer (device for measuring atmospheric pressure) is 0.1 inch for every 100 feet of elevation, what will the fall due to elevation be if the elevation is increased by 2,600 feet?

 - If 1 acre of alfalfa produces 1.5 tons of alfalfa each time the alfalfa is cut, and the alfalfa is cut 7 times each growing season, how much alfalfa can you cut in one season on 12 acres? *Hint*: First find the alfalfa per time cut, and then find the alfalfa per season.
- c. Solve: $\frac{50 \text{ ft}}{20 \text{ sec}} = \frac{20 \text{ ft}}{x}$
- If you want to draw a scale drawing where every inch represents 11 feet of a building that is 75 feet tall, how tall will your drawing be?

3. **Similar Figures** () — If you have two similar right triangles, one of which has a base of 4 in and a height of 8 in, and the other of which has a base of 3 in, what is the height of the second triangle? *Hint:* Draw the right triangles if you need to.

4. **Time and Distance** () — Solve.

a. How fast do you have to travel to go 400 miles in 5 hours?

b. If you're traveling at $65 \frac{\text{mi}}{\text{hr}}$, how much less time will it take you to go 400 miles than if you travel at $55 \frac{\text{mi}}{\text{hr}}$? Give your final answer in hours and minutes, rounded to the nearest minute.

Example: If your final answer is 1.33 hr, convert the 0.33 portion to minutes.

$$0.33 \text{ hr} \cdot \frac{60 \text{ min}}{1 \text{ hr}} = 19.8 \text{ min, which rounds to 20 min}$$

A final answer of 1.33 hr should be listed as 1 hr, 20 min

5. **Skill Sharpening**

a. Solve: $x - \frac{-3}{7} = 5\frac{1}{3}$

b. Solve: $x + \frac{-2}{-7} = 2\frac{1}{4}$

c. Say $\frac{7}{9}$ of your total land is planted with tomatoes; how many acres total do you have if you have 6 acres of tomatoes?

d. Solve: $x \cdot \frac{8}{7} = 12$

e. Simplify: $\frac{5}{\frac{5}{6}}$

f. If a field is 26 m long, how many feet long is it?




You may use a calculator on this worksheet whenever you see this symbol ().

- 1. Percent Review** — In order to calculate the value of an investment plus all the interest earned, you'll need to convert the interest rate (a percent) to a decimal. Remember, a % means *per hundred*. So you can convert a % to a decimal by dividing by 100 — that is, by moving the decimal place 2 more digits to the left.

Convert these percents to decimals.

Example: $0.05\% = 0.0005$

- a. 4%
- b. 0.6%
- c. 0.02%
- d. 500%

- 2. Finding the Ending Balance** () — Use the formula $P = P_0(1 + r)^t$ to answer the questions. Assume that no additional money is deposited or withdrawn from the investments.

- a. Find the balance of an initial investment of \$400 after 3 years if it is invested at a 6% yearly interest rate and the interest is compounded yearly?
- b. Find the balance of an initial investment of \$600 after 60 months if it is invested at a 0.25% monthly interest rate and the interest is compounded monthly.

- 3. Finding the Interest** () — In problem 2a, how much was earned in interest?

- 4. Skill Sharpening: Other Consumer Math Problems** ()

- a. If you've finished 40 out of 150 pages in a book, what percent have you completed?
- b. If you're told you need to purchase 10% extra fabric than what the pattern calls for, how much fabric do you need to purchase if the pattern calls for 4.5 yards? Round your answer up to the nearest quarter of a yard.
- c. If you pay a bill in several payments, where each payment of \$350 is 25% of the total bill, what is the total bill?

5. More Skill Sharpening ()

- a. Find the first three elements of the sequence $\{p, 6p, 36p, \dots\}$ if p is 5.
- b. Look for a common ratio by finding the ratio between each element in the sequence. Remember, a ratio is a comparison via division.

$$\frac{36p}{6p} = \underline{\hspace{2cm}}$$

$$\frac{6p}{p} = \underline{\hspace{2cm}}$$

- c. We would call the sequence $\{p, 6p, 36p, \dots\}$ a sequence.
- d. Now that you know the common ratio, what would the next element in the sequence be, assuming the pattern continues?

$$\{p, 6p, 36p, \underline{\hspace{1cm}} \dots\}$$

Quizzes and Tests



You may use a calculator () on *all* problems on this quiz.

You may consult the reference sheets (p. 425–434) as needed.

1. **Skill Check** — Simplify, except where otherwise instructed.

a. $7 + 8.2(1.5 - 1.25) - 8$

b. $-8 \cdot -1 \cdot -1$

c. $|-9|$

d. $\frac{1}{9} \div \frac{2}{3}$

e. $2\frac{1}{2} \cdot \frac{3}{10}$

f. $2\frac{1}{3} + 5\frac{6}{9}$

g. Solve using the distributive property, showing your work: $5(7 + 8)$

h. $8 + -7 + -3$

2. **More with Fractions and Factoring**

a. Simplify: $\frac{85 \text{ ft}}{1,045 \text{ ft}}$

b. What are the prime factors of 8 and of 88?

c. What is the greatest common factor of 8 and 88?

d. Rewrite as an improper fraction (do not simplify): $55 \div 10$

e. Rewrite $\frac{17}{50}$ as a decimal.

3. Geometry Time

- a. What is the cost of putting a 4-foot wide sidewalk along the front and one side of a lot 60 ft by 160 ft at \$2.50 a square foot?

- b. What is the volume of a bin that is 24 in deep, 42 in long, and 8 in tall?

4. Questions

- a. What does a negative sign mean?

- b. True or false: Math helped in discovering the speed of light.

5. Miscellaneous


- a. If you make \$62.54 at a job 15 days in a row, how much will you make altogether?

- b. If you cool a solution to 5°C , and then decrease its heat by 63°C , what will the ending temperature be?

- c. A farmer spent the following amounts on a 12-acre field: \$30 on plowing, \$22 on harrowing and rolling, \$16 on seed, \$2.75 on drilling, and \$27 on cutting and threshing. His income from the field was 240 bushels of wheat that he sold for \$2 a bushel, plus \$5 he earned renting out part of the field for pasturage. How much did the farmer make after deducting his expenses (i.e., what was his profit)? *Note:* As you might have guessed from the prices, this problem came from an early 1900s textbook.

Chapter 1:

Worksheet 1.1

- Math notebook should be prepped.
- Student should have added terms to notebook and (optionally) made flashcards for them.
- Answer should be 10 ways math applies outside of a textbook. See the “Where Did Math Originate?” section of Lesson 1.1 in the *Student Textbook* for ideas.
- A worldview is a set of truths (or falsehoods we believe to be true) through which we interpret life.
 - Math is a way of describing God’s creation that works because of God’s faithfulness.
 - We find evidence of God’s wisdom and care because a wise and caring God created all things very good, and we find evidence of suffering and death because this world is marred by sin and no longer the perfect world God created.
- an expression
 - 14
- Note on questions 6b and 6c:* Rounding was taught back in Book 1, Lesson 3.2. Please review if needed.
 - I can use a calculator whenever I see the symbol  or when instructed to on a quiz or test.
 - 0.54
 - 0.9
 - no
 - whenever one is given
 - Answer should be one of the study day suggestions given on p. 421 of this *Teacher Guide*.

Worksheet 1.2

Note: On this worksheet and the next, students will be reviewing a lot of the basics of arithmetic, including adding, subtracting, multiplying, and dividing both whole and decimal numbers. The book assumes students already know how to perform these mechanics; if they do not, do not start this book until they do.

- name, identify, and order
 - , +, =, ≠
 - Three of these methods should be listed: 20×6 , $20 \cdot 6$, $20(6)$, $(20)6$
 - Conventions are agreed-upon protocols or rules that aid us in communication.
- 8 tens or eighty
 - 8 hundredths or $\frac{8}{100}$
- Students were told to both rewrite the multiplication with parentheses and solve.
 - $5(6) = 30$
 - $2(105) = 210$
- Students were told to both rewrite the multiplication with a • and solve.
 - $8 \cdot 9 = 72$
 - $7 \cdot 218 = 1,526$
- $8 - 3 + 2 =$

- $5 + 2 = 7$
 - $(8 - 2)10 \div 2 =$
 $(6)10 \div 2 =$
 $60 \div 2 =$
30
 - $7.5(0.23 + 0.96) - 1.8 =$
 $7.5(1.19) - 1.8 =$
 $8.925 - 1.8 =$
7.13
 - $4\overline{)4 + 9 + 7} = 4\overline{)20} = 5$
 - $2.5 + 4.1(5.6 - 3) \div 2 =$
 $2.5 + 4.1(2.6) \div 2 =$
 $2.5 + 10.66 \div 2 =$
 $2.5 + 5.33 = 7.83$
- an expression
 - 4.25

Worksheet 1.3

- ≠
 - =
 - associative property of addition
 - ≠
 - =
 - identity property of multiplication
 - =
 - identity property of addition
 - =
 - =
- Check to make sure problems were solved using the distributive property.
 - $9(15 + 22) =$
 $9(15) + 9(22) =$
 $135 + 198 = 333$
 - $5(\$8.45 + \$3.99) =$
 $5(\$8.45) + 5(\$3.99) =$
 $\$42.25 + \$19.95 = \$62.20$
- 256
 - $256 \div 3 = 85.33$
 - \$11.36
 - \$2,918.58

Worksheet 1.4

- $total\ cost\ of\ Option\ B = 50(\$5.50 + \$25.30) + \$50 = \$1,590$
 $cost\ per\ employee\ of\ Option\ B = \$1,590 \div 50 = \$31.80$
 $difference\ in\ cost\ per\ employee = \$32.50 - \$31.80 = \0.70
Option B is less expensive by \$0.70 per employee.
- $Plan\ A = \$76.45 + \$19.99 + \$19.99 = \116.43
 $Plan\ B = 4(\$23.45 + \$35.40) = \$235.40$
 $difference\ in\ monthly\ cost = \$235.40 - \$116.43 = \118.97
- $amount\ made = income - expenses$
 $income = \$6 + 3(280)(\$0.05) + \$12 = \60
 $expenses =$
 $\$6 + 3.5(\$6.50) + (1,200 \div 100)\$0.75 =$
 $\$6 + \$22.75 + (12)\$0.75 =$
 $\$28.75 + \$9 = \$37.75$
 $amount\ made = \$60 - \$37.75 = \$22.25$
- $8 + (164)5 + 5 =$