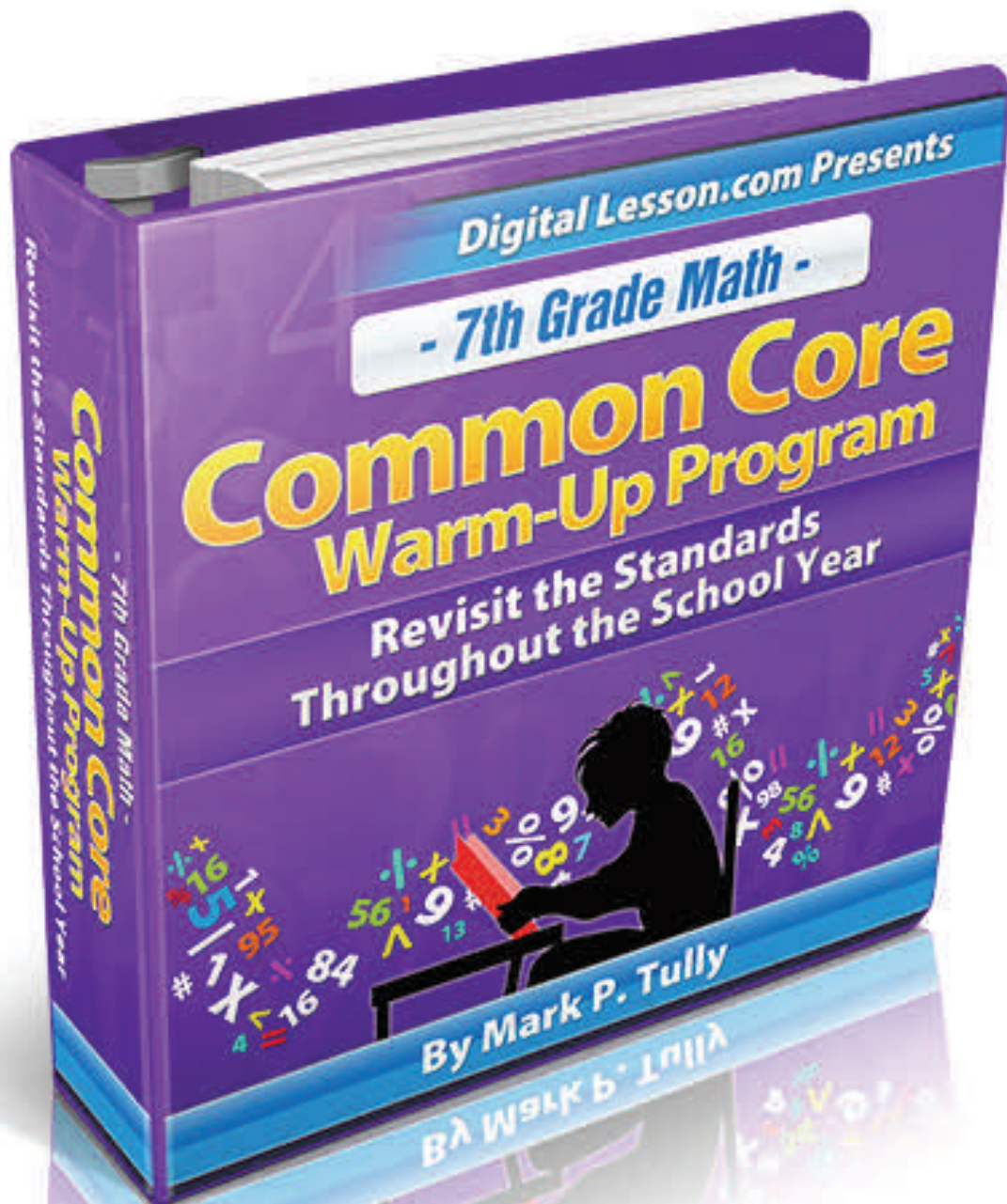


7th Grade Math

Common Core Warm-Up Program

Preview Pages

These preview pages include full teacher introduction, implementation suggestions, Common Core Standards correlation sample pages, and 11 Warm-Up pages from the 7th grade program.

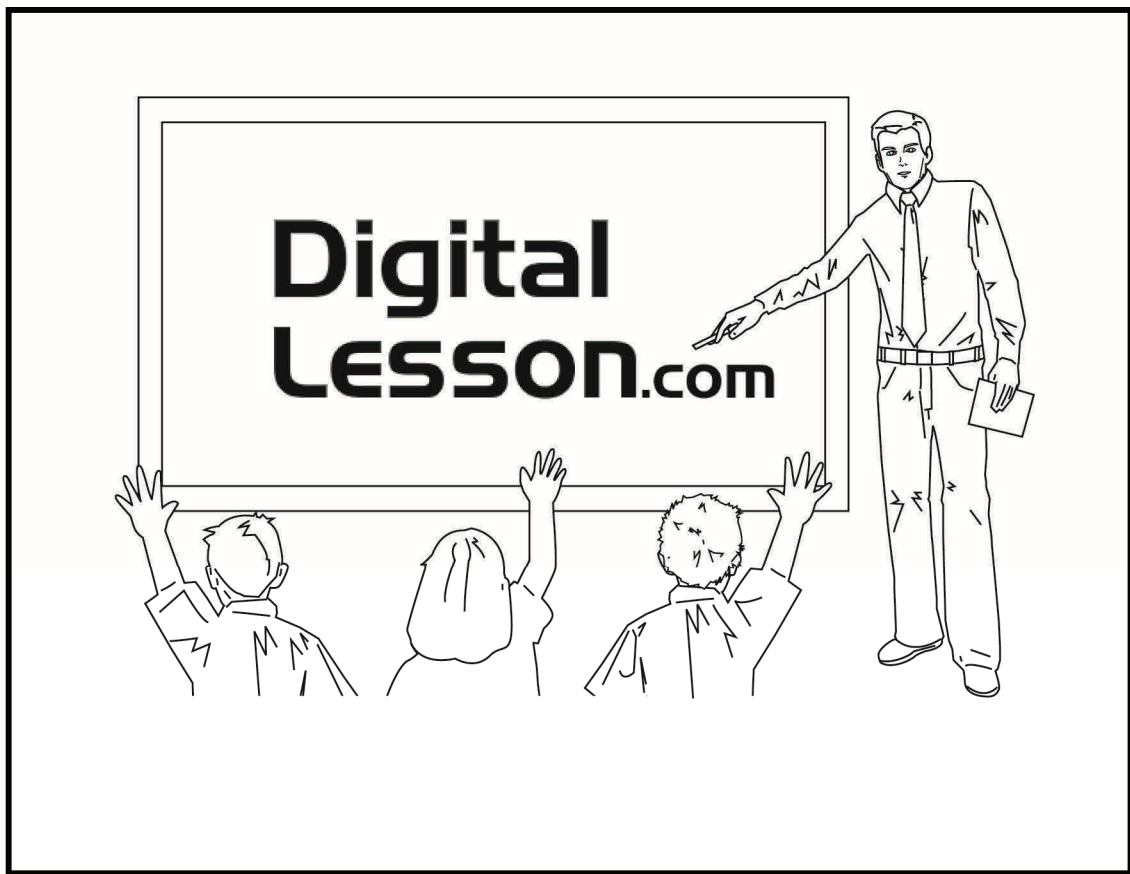


Mark P. Tully

7th Grade Math

Common Core

Warm-Up Program



120 Warm-Ups to Begin Your Math Class

Revisit the Standards Throughout the School Year

Reinforce Learning through Repetition

Sharpen Student Skills to Facilitate Problem Solving

7th Grade Math Common Core Warm-Up Program

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Thank you,

Mark Tully

Founder, DigitalLesson.com

Mark Tully is a mathematics teacher at Oak Middle School in the Los Alamitos Unified School District, Los Alamitos, California. He has been teaching for more than 25 years and during that time has served as Mathematics Department Chairman and as a Mathematics Mentor Teacher. He enjoys developing activities that are designed to present the prescribed mathematics curriculum and standards in a way that is active and engaging.

Mark's website, www.DigitalLesson.com, is designed to meet the needs of middle school math teachers. DigitalLesson.com specializes in providing instant downloads of engaging, hands-on math activities. These middle school math activities are designed to enhance the middle school math program. Also included on the site are other math resources tailored for the middle school math teacher.

Mark also publishes the *Middle School Math Treasures* newsletter. The newsletter includes resources, ideas, and activities for middle school math teachers. A subscription to *Middle School Math Treasures* is free! Sign up on the home page of DigitalLesson.com. Unsubscribe at any time. We will never rent or sell your e-mail address. Enjoy this great, free resource!

We would love to hear about your experiences using this book, [7th Grade Math Common Core Warm-Up Program](#) in your classroom. Please e-mail us with any comments at mark@digitallesson.com.

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7th Grade Math Common Core Warm-Up Program

Table of Contents

Teacher Introduction to the Common Core Warm-Up Program.....	6
Implementing the Program in Your Classroom.....	8
Sample Student Warm-Up Recording Sheet.....	11
Student Warm-Up Recording Sheet.....	12
List of Common Core Standards Covered in Each Warm-Up.....	13
List of Warm-Ups Where Each Standard is Covered.....	16
Warm-up Program Answer Keys.....	19
7th Grade Math Common Core Warm-Ups (1-120).....	24
(Click on bookmarks in this pdf eBook for easy access to any warm-up)	
Additional Resources Available at DigitalLesson.com.....	144

7th Grade Math Common Core Warm-Up Program

Teacher Introduction (p. 1)

Why a Math Warm-Up Program?

I have used several math warm-up programs in my classroom over the past few years and I believe that **they have played a significant role in the achievement of my math students**. I'll get into more detail below, but here is a list of the key benefits that I have experienced when using a warm-up program:

- * warm-ups set the tone for a productive math class period
- * warm-ups give me the opportunity to quickly pre-teach or review important math concepts
- * warm-ups create multiple opportunities for students to learn each concept throughout the year
- * warm-ups can increase student performance on mathematical tasks and tests that have math skills as their foundation

Repetition and experience are keys to learning. Think of the strong mathematical foundation that your students will build as they continuously review key 7th grade concepts in this Common Core Warm-Up Program.

Setting the Tone for a Productive Math Class Period

When my students enter my classroom they find 5 warm-up problems projected on the screen at the front of the classroom. I have trained my students to quiet down when the bell rings, copy down their homework assignment, and then begin their warm-up problems. This calming, systematic start to each day becomes familiar to students and maximizes effective instructional time in the classroom.

Repeated Opportunities for Students to Learn

A few years ago I was involved in a discussion with my principal about how we could improve student performance in math. I told her that to me this was NOT a mystery. **If students were given the opportunity to practice the key skills in their grade level a number of times during the school year, their retention and ability to use these concepts would dramatically increase.** My principal then informed me that we had purchased a set of warm-ups that would help us accomplish our goal.

Too often (before I used warm-ups) students were taught a linear progression of grade level skills during the year and then we held a multi-day “cram session” where we reviewed the most important skills again before our end of the year assessments. This method proved to be **not nearly as effective as regular warm-up problems**. Regular warm-up problems often expose students to the key grade level concepts 5-10 times (or more) during the course of the school year. The results of this consistent program of review were noteworthy.

7th Grade Math Common Core Warm-Up Program

Teacher Introduction (p. 2)

The Results of Using Daily Warm-Ups in the Math Classroom

The year that we purchased the warm-up program we were only able to complete 50-60 of the daily warm-ups because we started a few months into the school year. Still, our 7th grade math state test results showed the biggest increase out of any subject and grade level in our school. While my conclusion is based solely on observation (and I know that there are other factors involved) my colleagues and I are certain that **repeated exposures to the key content standards** in 7th grade **made a significant difference** in our results.

The following year our 6th grade team (I teach both grade levels) created our own set of warm-ups because a commercial product like the one we used in 7th grade was not available to us. We experienced similar results of significant improvement by our 6th grade students on the state mathematics test that year.

To me it is simply common sense that students will better understand ratios, geometry, equations, probability, and many other topics when they are given **multiple opportunities to learn each concept throughout the school year.**

The Common Core State Standards for 7th Grade Math

With the vast majority of states having adopted the Common Core State Standards for Mathematics, how will skill-based warm-ups fit in with these new standards? I believe that students will always need a strong skill set in order to approach the problem solving tasks and activities that are part of the Common Core.

Based on my experiences as a teacher for over 25 years, **I have developed this 7th Grade Math Common Core Warm-Up Program to both implement and help support the Common Core State Standards.**

Each of the 120 warm-up pages in this book has 5 problems aligned with the Common Core State Standards for 7th grade math. It is **my goal that this warm-up program will help propel your 7th grade math students to success in math** this year and for years to come.

Implementing this Warm-Up Program in Your Classroom

In the **pages that follow** I will give you a step-by-step description of how I implement a warm-up program in my classroom. As always, these are ideas and suggestions based on my experience. **As a math teacher you should absolutely modify any procedures so that they work most effectively for you and your classroom.**

7th Grade Math Common Core Warm-Up Program

Implementing the Program in Your Classroom (p. 1)

1) Students Complete the Five Daily Warm-Up Problems (5-8 minutes)

When students enter the classroom they see a warm-up projected on the front screen. They complete the problems to the best of their ability, **showing their work on the warm-up recording sheet provided with this program**. After 5-8 minutes we review the answers, even if not every student has finished. Students **number the problems** and **show either work or the original problem** on their recording sheet.

2) Checking the Warm-Up Problems (2-4 minutes)

Student Participation

When I review the answers to the warm-ups I keep track of who answers each question by putting a tally mark on my seating chart. That way I ensure that everyone participates in this activity over the course of time. I call on a student and ask that student to share their answer and then, if appropriate, explain how they solved the problem. Some problems are straight computation and do not require an explanation.

Distributing Tickets

As an incentive for answering questions I select a student and give them 6 tickets to distribute. Five are for the students that correctly answer and explain the warm-up problems and 1 is to be kept by the student who distributes the tickets. Students receiving a ticket (from a basic roll of tickets that I purchase from Staples) put their name on the back and place the ticket in a class-specific can at the back of the classroom. Every 3-4 weeks I hold ticket drawings where I select 10-20 tickets and give away treats, school passes, homework passes, and any other prizes that I can get my hands on. I mention this at Back-to-School Night and parents will often donate items for our ticket drawings.

Teaching Mini Lessons

As we review the math problems I often teach small mini-lessons. We discuss any problems that are previews of lessons that have not yet been taught as well as those problems that review or apply previously covered concepts. I realize that these short explanations will not be grasped by every student. However, a number of students will better understand after the explanation and will be more prepared for similar problems in the future. Remember, this warm-up program is not taught for immediate mastery of every concept. Rather, multiple exposures to the mathematics will help lead students to mastery.

Answer Key Notes

- * Answers for graphing inequality problems such as $x < 3$ are given as “open dot, to left.”
- * Repeating decimals such as “0.3 repeating” are shown in the answer key as 0.3333.....
- * Fractional answers are written using a slash so $\frac{1}{2}$ would be written 1/2.
- * Some answers require equations to be written. One equation is given although other forms are possible.

7th Grade Math Common Core Warm-Up Program

Implementing the Program in Your Classroom (p. 2)

3) Warm-Up Corrections

Students do the warm-up problems in pencil and correct them in colored pencil or ink on their Student Warm-Up Recording Sheet. They show work for each problem and place the answers in the answer column.

As we correct and discuss the problems students are instructed to show corrections (in color) next to each problem that they have missed. In my class, a correction is not just copying the correct answer in color next to their incorrect answer in the answer column. I require that students actually show the work (calculations, drawings, explanations, etc.) for any missed problems next to their original work.

4) Grading Warm-Ups

At the end of each five-day warm-up period I collect the students' recording sheets. In giving the students credit for their work and assigning a grade I am less concerned with their actual score and more concerned with student learning. With this in mind I consider three things before assigning a grade.

First, I check to make sure that students have shown some kind of work on every problem. On simple problems this may just be writing the problem down. On other problems this may mean showing the calculations involved in determining an answer.

Secondly, I monitor student corrections. As mentioned above, I require students to correct (in color) each and every problem that they miss. This is their opportunity for learning. As such, students who do not complete their corrections do not receive full credit. Corrections should include the work associated with arriving at the correct answer, not simply copying down the right answer when it is read aloud in class.

Thirdly, I look at the neatness and completeness of the paper. There are places on the recording sheet for the day, date, warm-up number, score, work, answers, and heading. If the paper is not filled out completely then the student will not receive full credit.

I count warm-ups as part of the homework grade in my classroom. Once again, I want to re-emphasize the point that I am more concerned with student learning during the warm-up process than I am with how many problems they get correct each day. If students miss problems but learn from their mistakes (and show their corrections) they can still receive full credit on the assignment.

Sometimes I use exceptional Student Warm-Up Recording Sheets as examples to help students understand the kind of work that I expect.

Finally, do not be overwhelmed by the prospect of grading several class sets of warm-ups. I quickly scan a paper for work, corrections, and completeness. I also notice how many problems they answered correctly out of the total. I can usually grade a class set of 35 papers in about 10 minutes.

7th Grade Math Common Core Warm-Up Program

Implementing the Program in Your Classroom (p. 3)

Additional Tips for Implementation

Navigation - There are **two main ways to navigate to the warm-up page that you will be using on a given day**. One option is to use the **bookmarks function** on this pdf file. Just click on the link for a given warm-up to be directed to that page. The second option is to simply **add 23 to the scheduled warm-up number** to find the correct page in this eBook. For example, to access Warm-up # 50 go to page 73.

Absences - Absent students are instructed to write “absent” on their recording sheet for any days that they miss school. No makeups are given on warm-ups.

Show Work - Work is required to be shown on all problems. For those problems that can be solved mentally, students should, at a minimum, write down the problem given.

Projection Tips - The warm-ups can be projected onto a screen directly from the pdf using a projector or by using physical copies of the warm-ups and a document camera. To keep the projection large enough it may be necessary to scroll down the page or slide the physical copy beneath the document camera. In such cases instruct students to complete the top two problems (problems #1 and #4) because they will not be visible if the warm-up needs to be repositioned.

No Calculators - This warm-up program is designed to be done without calculators. Required calculations are within the reasonable ability range for the students.

Encourage Drawings - Certain types of problems (coordinate plane problems, etc.) can best be solved by quickly sketching or drawing a picture to help find the answer. Encourage drawing as a strategy.

Time Period - The warm-ups and their work are completed on a recording sheet that has room for 5 warm-ups. Although I am very consistent in using warm-ups, I do not give warm-ups every single day. Sometimes there is a test or other assignment that requires the entire class period and so no warm-up is given on that day. Do not feel that warm-ups need to start on a Monday and end on a Friday. I start a new warm-up sheet when needed whether that is on a Monday or any other day of the week.

New Problem Types - As mentioned previously, I do not expect students to answer every problem correctly, especially when new concepts are introduced. I briefly explain the new concept and move on. Some students will understand the first time and others will understand with further repetition.

120 Warm-ups - I have never finished 120 warm-ups in one school year even though our school year has about 180 days. The reasons for this include days without warm-ups (tests, projects, assemblies, etc.) as well as days at the beginning and end of the school year where I do not use warm-ups because we are either in intro mode or windup mode. In addition, I like to mix in other starter activities every now and then. If you do end up needing more than 120 warm-ups my suggestion would be to cycle back around and choose some of the warm-ups to rework. Your students will not have these problems memorized and so they will continue to provide an effective review of 6th grade math concepts.

Math 7

LAST, FIRST

Warm-Ups

(Sample Page)

MATH, PERIOD 2

Common Core Review

10/12/18

MONDAY

10/12

Warm-Up # 26

4 / 5

1) 53

2) \$12.45

1) Show work or problem 2) Show work or problem 3) Show work or problem 4) Show work or problem 5) Show work or problem

3) 32 IN.²

4) $X \geq 5$

5) 3,284

Warm-Up # _____ / 5

(REMEMBER TO CORRECT ALL MISSED PROBLEMS IN COLOR.)

1) _____

2) _____

3) _____

4) _____

5) _____

Warm-Up # _____ / 5

(NUMBER YOUR WORK)

1) _____

2) _____

3) _____

4) _____

5) _____

Warm-Up # _____ / 5

1) _____

2) _____

3) _____

4) _____

5) _____

Warm-Up # _____ / 5

1) _____

2) _____

3) _____

4) _____

5) _____

Warm-Up Page Score 22 / 25

Math 7

Warm-Ups

Common Core Review

_____ Warm-Up # _____ / 5
1) _____
2) _____
3) _____
4) _____
5) _____

_____ Warm-Up # _____ / 5
1) _____
2) _____
3) _____
4) _____
5) _____

_____ Warm-Up # _____ / 5
1) _____
2) _____
3) _____
4) _____
5) _____

_____ Warm-Up # _____ / 5
1) _____
2) _____
3) _____
4) _____
5) _____

_____ Warm-Up # _____ / 5
1) _____
2) _____
3) _____
4) _____
5) _____

Warm-Up Page Score _____ / _____

7th Grade Math Common Core Warm-Up Program

Common Core State Standards Correlation by Warm-Up (1-56)

- 1) 7.NS.2a, 7.NS.1a, 7.RP.2b, 7.EE.3, 7.G.1
- 2) 7.NS.1d, 7.NS.1c, 7.RP.3, 7.G.2, 7.SP.5
- 3) 7.NS.3, 7.NS.2d, 7.EE.4a, 7.G.4, 7.RP.3
- 4) 7.NS.3, 7.EE.4a, 7.SP.5, 7.G.4, 7.RP.3
- 5) 7.NS.2a, 7.NS.1b, 7.SP.2, 7.G.6, 7.EE.4a
- 6) 7.NS.2b, 7.EE.1, 7.RP.3, 7.SP.5, 7.RP.2a
- 7) 7.NS.2b, 7.NS.1c, 7.G.1, 7.G.6, 7.EE.4b
- 8) 7.NS.2a, 7.NS.2d, 7.RP.3, 7.NS.1b, 7.NS.1
- 9) 7.NS.1a, 7.EE.4a, 7.RP.3, 7.EE.3, 7.SP.5
- 10) 7.NS.2a, 7.EE.1, 7.NS.1d, 7.G.4, 7.SP.1
- 11) 7.EE.3, 7.NS.2d, 7.RP.3, 7.G.4, 7.G.1
- 12) 7.NS.2b, 7.EE.3, 7.SP.5, 7.RP.2b, 7.G.5
- 13) 7.NS.3, 7.EE.4a, 7.NS.2c, 7.EE.2, 7.SP.5
- 14) 7.EE.3, 7.NS.1b, 7.RP.2b, 7.G.1, 7.RP.3
- 15) 7.NS.2a, 7.NS.2d, 7.SP.5, 7.G.2, 7.RP.1
- 16) 7.NS.3, 7.EE.1, 7.NS.2b, 7.G.6, 7.G.1
- 17) 7.NS.3, 7.RP.3, 7.NS.2c, 7.G.4, 7.SP.5
- 18) 7.NS.3, 7.NS.1c, 7.NS.1d, 7.RP.3, 7.G.6
- 19) 7.NS.3, 7.G.4, 7.NS.1c, 7.EE.3, 7.RP.2a
- 20) 7.NS.2a, 7.RP.1, 7.SP.5, 7.G.2, 7.EE.4b
- 21) 7.NS.2a, 7.NS.1a, 7.RP.3, 7.EE.2, 7.G.5
- 22) 7.EE.3, 7.NS.2d, 7.RP.3, 7.G.1, 7.SP.5
- 23) 7.NS.3, 7.EE.4a, 7.NS.1c, 7.G.1, 7.RP.2b
- 24) 7.NS.3, 7.EE.1, 7.NS.1d, 7.SP.5, 7.G.1
- 25) 7.NS.3, 7.EE.4a, 7.SP.2, 7.G.1, 7.EE.3
- 26) 7.NS.2a, 7.NS.2d, 7.RP.3, 7.G.3, 7.SP.1
- 27) 7.EE.3, 7.NS.1b, 7.NS.2c, 7.EE.1, 7.RP.1
- 28) 7.NS.2a, 7.NS.1c, 7.G.4, 7.EE.3, 7.SP.1
- 29) 7.NS.2b, 7.RP.3, 7.G.4, 7.EE.2, 7.EE.3
- 30) 7.NS.3, 7.EE.4b, 7.RP.1, 7.G.1, 7.SP.6
- 31) 7.EE.3, 7.SP.5, 7.NS.1d, 7.G.6, 7.EE.4a
- 32) 7.NS.2a, 7.EE.4a, 7.RP.3, 7.EE.1, 7.G.1
- 33) 7.EE.3, 7.RP.3, 7.NS.1c, 7.G.3, 7.SP.7a
- 34) 7.NS.3, 7.EE.2, 7.NS.2b, 7.SP.8a, 7.G.5
- 35) 7.NS.3, 7.EE.1, 7.RP.3, 7.SP.5, 7.G.1
- 36) 7.NS.1a, 7.EE.4a, 7.NS.2c, 7.G.6, 7.EE.3
- 37) 7.EE.3, 7.NS.1d, 7.SP.8a, 7.G.4, 7.RP.2a
- 38) 7.NS.3, 7.NS.1c, 7.G.2, 7.EE.1, 7.RP.3
- 39) 7.NS.2a, 7.G.4, 7.SP.2, 7.EE.3, 7.RP.2b
- 40) 7.NS.3, 7.EE.4a, 7.SP.5, 7.RP.3, 7.G.5
- 41) 7.NS.2b, 7.RP.3, 7.SP.6, 7.G.1, 7.NS.1
- 42) 7.EE.3, 7.NS.2d, 7.G.6, 7.NS.3, 7.SP.8
- 43) 7.NS.3, 7.EE.4a, 7.RP.1, 7.EE.3, 7.G.6
- 44) 7.NS.3, 7.EE.4b, 7.RP.3, 7.G.4, 7.SP.4
- 45) 7.NS.3, 7.NS.1b, 7.RP.2b, 7.SP.5, 7.G.5
- 46) 7.NS.2d, 7.EE.1, 7.NS.1d, 7.G.6, 7.SP.2
- 47) 7.NS.2a, 7.G.4, 7.RP.3, 7.EE.2, 7.SP.1
- 48) 7.NS.3, 7.EE.4a, 7.SP.5, 7.RP.2b, 7.G.6
- 49) 7.NS.3, 7.NS.2c, 7.SP.8, 7.RP.3, 7.G.5
- 50) 7.NS.3, 7.EE.4b, 7.NS.1c, 7.G.4, 7.RP.1
- 51) 7.NS.3, 7.EE.1, 7.SP.8a, 7.G.6, 7.RP.2b
- 52) 7.EE.3, 7.NS.1d, 7.RP.3, 7.SP.5, 7.G.6
- 53) 7.NS.3, 7.NS.1c, 7.RP.3, 7.G.2, 7.EE.4a
- 54) 7.NS.3, 7.EE.4b, 7.NS.2c, 7.SP.1, 7.G.1
- 55) 7.NS.2d, 7.EE.4a, 7.RP.2b, 7.G.4, 7.EE.3
- 56) 7.NS.3, 7.EE.4b, 7.RP.3, 7.SP.5, 7.G.5

7th Grade Math Common Core Warm-Up Program

List of Warm-ups Where Each Standard is Covered (1 of 3)

Ratios and Proportional Relationships (7.RP)

7.RP.1: 15, 20, 27, 30, 43, 50, 61, 66, 79, 88, 104, 111

7.RP.2

7.RP.2a: 6, 19, 37, 59, 75, 76, 86, 98, 99, 110

7.RP.2b: 1, 12, 14, 23, 39, 45, 48, 51, 55, 62, 64, 65, 71, 77, 80, 92, 109, 113

7.RP.2c: 63, 68, 83, 95, 105

7.RP.2d: 72, 78, 89, 91, 107, 108, 115, 117

7.RP.3: 2, 3, 4, 6, 8, 9, 11, 14, 17, 18, 21, 22, 26, 29, 32, 33, 35, 38, 40, 41, 44, 47, 49, 52, 53, 56, 57, 58, 60, 63, 67, 70, 73, 81, 82, 84, 85, 90, 93, 94, 97, 100, 101, 102, 103, 106, 112, 114, 116, 118, 119, 120

The Number System (7.NS)

7.NS.1: 8, 87, 96

7.NS.1a: 1, 9, 21, 36, 41, 60, 68, 71, 74, 96, 104, 119

7.NS.1b: 5, 8, 14, 27, 45, 62, 78

7.NS.1c: 2, 7, 18, 19, 23, 28, 33, 38, 50, 53, 75, 86, 92, 108, 111

7.NS.1d: 2, 10, 18, 24, 31, 37, 46, 52, 66, 84, 94, 109

7.NS.2

7.NS.2a: 1, 5, 8, 10, 15, 20, 21, 26, 28, 32, 39, 47, 86, 95, 107, 120

7.NS.2b: 6, 7, 12, 16, 29, 34, 41, 57, 65, 67, 69, 76, 85, 89, 91, 100, 103, 110

7.NS.2c: 13, 17, 27, 36, 49, 54, 74, 83, 99, 117

7.NS.2d: 3, 8, 11, 15, 22, 26, 42, 46, 55, 60, 72, 80, 87, 90, 101, 112, 115

7.NS.3: 3, 4, 13, 16, 17, 18, 19, 23, 24, 25, 30, 34, 35, 38, 40, 42, 43, 44, 45, 48, 49, 50, 51, 53, 54, 56, 58, 59, 61, 62, 63, 64, 68, 69, 70, 73, 77, 79, 80, 81, 82, 84, 88, 89, 92, 93, 94, 97, 98, 102, 105, 106, 108, 113, 114, 116, 118

7th Grade Math Common Core Warm-Up Program

Common Core State Standards Warm-Up Answers (1-28)

- | | | | | | |
|-----|-----------------------|------------------------------|--------------------------|-------------------------------|----------------------------|
| 1) | 1) $6x + 21$ | 2) 0 | 3) 210 miles/gallon | 4) \$38.50/hour | 5) 122.5 miles |
| 2) | 1) 400 | 2) 64 | 3) \$600 | 4) isosceles | 5) 0 |
| 3) | 1) -10 | 2) 0.3125 | 3) $x = 4$ | 4) $A = 144\pi \text{ cm}^2$ | 5) \$7.80 |
| 4) | 1) 23.844 | 2) $y = -41$ | 3) $1/4$ | 4) $A = 50.24 \text{ in}^2$ | 5) \$32,400 |
| 5) | 1) 105 | 2) 0 | 3) 360 people | 4) 150 ft^2 | 5) $c = 5t + 12.35$ |
| 6) | 1) undefined | 2) $15x + 6y - 14z$ | 3) \$480 | 4) 1 | 5) yes |
| 7) | 1) -4,474 | 2) 65 | 3) 6 $1/2$ inches | 4) 30 m^2 | 5) $w \geq 6$ |
| 8) | 1) $15x - 45$ | 2) 0.363636..... | 3) \$90 | 4) $7/8$ of the pizza | 5) $-25 + 40 = 15$ |
| 9) | 1) 14 | 2) $x = 3$ | 3) \$6,000 | 4) 156 stickers | 5) neither |
| 10) | 1) -960 | 2) $31x + 6y - 11z$ | 3) 177 | 4) $A = 400\pi$ | 5) yes |
| 11) | 1) $7 \frac{5}{8}$ | 2) 0.375 | 3) \$26.25 | 4) $A = 153.86 \text{ ft}^2$ | 5) 600 miles |
| 12) | 1) 8 | 2) $1/6$ | 3) 17% | 4) 24 ft./sec. | 5) $x=180-53,127^\circ$ |
| 13) | 1) 287.64 | 2) -102 | 3) 3,700 | 4) 8% | 5) likely event |
| 14) | 1) 99 | 2) 0 | 3) 26 pages/hour | 4) 3.5 ft. by 4 ft. | 5) \$120 |
| 15) | 1) $56x-42y+63$ | 2) 0.55555.... | 3) 1 | 4) impossible (190°) | 5) $1/10$ pizza/per. |
| 16) | 1) 2.34 | 2) $-14x+91y-25z$ | 3) $-2/3$ | 4) $A = 4,275 \text{ cm}^2$ | 5) 62.8 ft. |
| 17) | 1) $2/5$ | 2) \$3.90 | 3) 8,600 | 4) $C = 31.4 \text{ cm}$ | 5) unlikely event |
| 18) | 1) $7 \frac{7}{20}$ | 2) 45 | 3) 600 | 4) \$36,000 | 5) $h = 40 \text{ ft.}$ |
| 19) | 1) -1,120 | 2) $C = 16.2\pi \text{ ft.}$ | 3) $-23 + 74 = 51$ | 4) 20 home runs | 5) no |
| 20) | 1) 68 | 2) 2 miles/hour | 3) $1/2$ | 4) equilateral (acute) | 5) $m \geq 10$ |
| 21) | 1) 1,800 | 2) 0 | 3) \$3,600 | 4) 20% | 5) $180-37=x,53^\circ$ |
| 22) | 1) 74 | 2) 0.8 | 3) \$57.00 | 4) 75 meters | 5) 0 |
| 23) | 1) $14 \frac{13}{20}$ | 2) -93 | 3) $86 + 55 = 141$ | 4) 3.5 feet | 5) 24 pizzas/hour |
| 24) | 1) 15 | 2) $6x - 18y - 25z$ | 3) 1,000 | 4) 0 | 5) $d = 3 \text{ in.}$ |
| 25) | 1) $3 \frac{1}{2}$ | 2) $x = 3$ | 3) 900 students | 4) $A = 288 \text{ ft}^2$ | 5) $35 \frac{3}{4}$ pizzas |
| 26) | 1) $-15x+12y-18$ | 2) 0.83333.... | 3) \$52.50 | 4) rectangle | 5) no |
| 27) | 1) 101 | 2) 7 | 3) 168,000 | 4) $12(x + 3)$ | 5) $1/4$ pizza/pers. |
| 28) | 1) -7,200 | 2) 66 | 3) $C = 43.96 \text{ m}$ | 4) 44 golf balls | 5) \$21,000 |

Warm-Up 3

<p>1) $-12 + 15 + (-30) + 17 =$</p> <p>7.NS.3</p>	<p>4) Find the area of a circle, in terms of pi, if the radius is 12 cm.</p> <p>7.G.4</p>
<p>2) Convert $5/16$ to a decimal using long division.</p> <p>7.NS.2d</p>	<p>5) The Jenson family enjoyed a meal at the Burger Barn and decided to leave a 20% tip for their server. The bill was \$38.74. Round to the nearest dollar and then determine how much the Jenson family should leave for a tip.</p> <p>7.RP.3</p>
<p>3) Solve the equation. $12x + 3 = 51$</p> <p>7.EE.4a</p>	

Warm-Up 12

1) $(64 \div -4) \div (-2) =$

7.NS.2b

2) Ralph ate $\frac{1}{2}$ of a pie before dinner. After dinner he ate $\frac{1}{3}$ of what was left. What fraction of the pie did he eat after dinner?

7.EE.3

3) To the nearest percent, what is the probability of rolling a 4 on a number cube?

7.SP.5

4) Identify the constant of proportionality (unit rate) using the table below. Give the rate in feet per second.

Seconds	Feet
5	120
15	360
20	480

7.RP.2b

5) One of two supplementary angles is 53° . Let x = the measure of the other supplementary angle. Write and solve an equation to find the measure of angle x .

7.G.5

Warm-Up 25

1) $7 \frac{7}{8} \div 2 \frac{1}{4} =$

7.NS.3

2) Solve the equation.

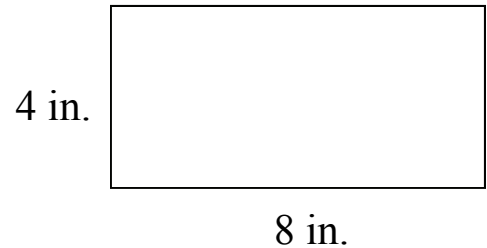
$$15x + 8 = 53$$

7.EE.4a

3) In a survey 60 out of 80 students were in favor of the new school logo design. If 1,200 students attend the school, how many would be expected to favor the new logo?

7.SP.2

4) Find the actual area of the rectangle shown in the scale drawing below. Use the scale 1 inch = 3 feet.



7.G.1

5) Rizzo's Pizza Parlor sold 127 individual slices of pizza on Tuesday and 159 slices on Wednesday. If each slice is $\frac{1}{8}$ of a pizza, how many pizzas did they sell from individual slices on these two days?

7.EE.3

Warm-Up 33

<p>1) $12^2 + 4(23) - 11(-2) =$</p> <p>7.EE.3</p>	<p>4) If a right rectangular prism is sliced with a plane perpendicular to its base, what shape would be formed?</p> <p>7.G.3</p>
<p>2) How much is Rick's 14% commission on \$150,000 in sales?</p> <p>7.RP.3</p>	<p>5) There are 38 students in Mr. Reynolds math class and 20 are boys. If a student is selected at random what is the probability that a girl is selected? Give the answer as a fraction in simplest form.</p> <p>7.SP.7a</p>
<p>3) Rewrite the following subtraction problem as adding the additive inverse, then solve. $-254 - (62) =$</p> <p>7.NS.1c</p>	

Warm-Up 35

1) $-48 \div (-4) \div (-4) =$

7.NS.3

2) Combine like terms: $4x - 52y - 31z + 64y - 16z - 23x$

7.EE.1

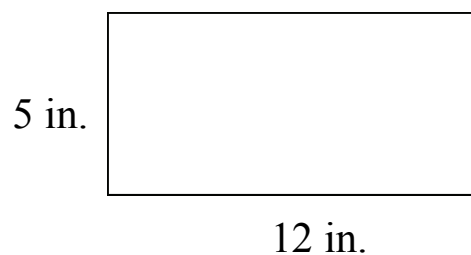
3) The town of Smallville had a population of 700. Now the population is 805. What is the percent increase in the population?

7.RP.3

4) A spinner is divided into eight equal sections. Each section is a different color. Is spinning and landing on blue a likely event, unlikely event, or neither?

7.SP.5

5) Find the actual perimeter of the rectangular park shown in the scale drawing below. Use the scale 1 inch = 5 feet.



7.G.1

Warm-Up 39

1) $-9(3x + 7y - 8) =$

7.NS.2a

2) What is the area of a circle that has a diameter of 10 feet? (Use 3.14 for pi.)

7.G.4

3) In a survey 25 out of 200 students indicated that they would vote for Suzy for class president. If 1,000 students are voting in the election, how many would be expected to vote for Suzy?

7.SP.2

4) Juliet planned on purchasing a \$1500 vacation trip. After receiving a 30% discount, how much did she pay?

7.EE.3

5) Identify the constant of proportionality (unit rate) using the table below. Give the rate in TV hours per day.

Days	Hours of
2	7
10	35
15	52.5

7.RP.2b

Warm-Up 44

<p>1) $762.53 - 84.072 =$</p> <p>7.NS.3</p>	<p>4) Find the area of a circle, in terms of pi, if the radius is 15 centimeters.</p> <p>7.G.4</p>
<p>2) Solve the inequality: $5x + 14 \geq 54$</p> <p>7.EE.4b</p>	<p>5) Rolanda scored 20, 15, and 16 on her first three math quizzes. Jetta scored 16, 19, and 17 on her quizzes. Using the mean to compare, who has the higher math quiz scores so far?</p> <p>7.SP.4</p>
<p>3) Janelle had \$120 when she went shopping. After she finished shopping she had \$96. What is the percent decrease in her amount of money?</p> <p>7.RP.3</p>	

Warm-Up 52

1) $72 + 5 \cdot 3^2 - 1^5 =$

7.EE.3

2) Use the Commutative Property to find the sum.

$63 + 115 + 137 + 285 =$

7.NS.1d

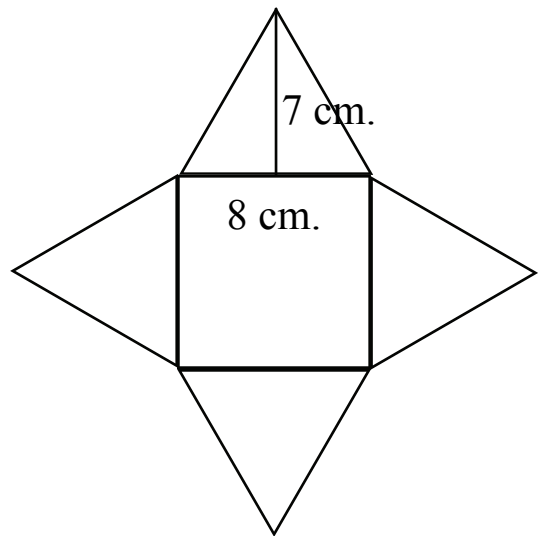
3) Find the simple interest on \$5,000 at 6% interest for 3.5 years.

7.RP.3

4) Is randomly selecting the letter “e” from the word “fascinate” a likely event, unlikely event, or neither?

7.SP.5

5) Use the net below to find the surface area of the square pyramid.



7.G.6

Warm-Up 91

1) $-54,432 \div (-12) =$

7.NS.2b

2) What is the probability of rolling an 8 on a regular number cube?

7.SP.5

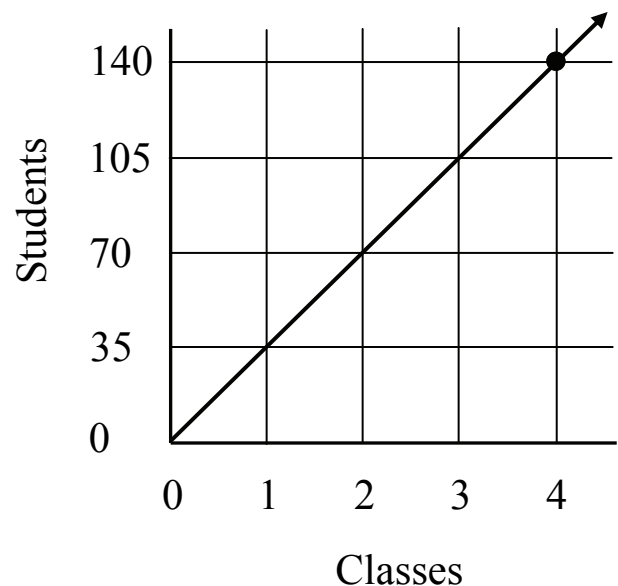
3) One of two complementary angles is 71° . Let x = the measure of the other complementary angle. Write and solve an equation to find the measure of angle x .

7.G.5

4) If Trina multiplied her purchase price by 1.07 to get her total bill, what percent sales tax was she paying?

7.EE.2

5) Give the coordinates of the point on the graph. Then find the unit rate.



7.RP.2d

Warm-Up 101

1) Convert $\frac{5}{8}$ to a decimal using long division.

7.NS.2d

2) Solve the inequality:

$$-5x + 4 \geq -36$$

7.EE.4b

3) Katie leaves a 25% tip on a restaurant bill of \$82.00. Including the tip, what is the total amount of her bill?

7.RP.3

4) Is randomly selecting a queen from a deck of cards a likely event, unlikely event, or neither?

7.SP.5

5) Find the actual perimeter of the room shown in the scale drawing below. Use the scale 1 inch = 4 feet.

3 in.



5 in.

7.G.1

Warm-Up 120

1) $-21(2x - 4y - 5) =$

7.NS.2a

2) Solve the inequality:

$$-3x - 22 \geq 23$$

7.EE.4b

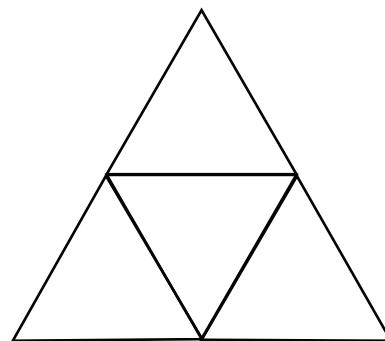
3) Jim is buying a new camping tent for \$123. If the state sales tax rate is 8%, how much will Jim have to pay altogether for the camping tent, including tax?

7.RP.3

4) How many outcomes are possible if you roll a number cube and flip a coin?

7.SP.8b

5) Use the net below to find the surface area of the triangular pyramid. The four congruent triangles each have a base of 8 inches and a height of 7 inches.



7.G.6

7th Grade Math Common Core Warm-Up Program

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Founder, DigitalLesson.com