

Chapter 05

My happiness grows in direct proportion to my acceptance, and in inverse proportion to my expectations. — Michael J. Fox


STUDENTS WILL BE ABLE TO...

- Understand ratios of rational numbers and use ratio tables to represent equivalent ratios.
- Understand rates involving fractions and use unit rates to solve problems.
- Determine whether two quantities are in a proportional relationship.
- Use proportions to solve ratio problems.
- Represent proportional relationships using graphs and equations.
- Solve problems involving scale drawings.

Ratios


Notation
5:6 5 to 6 5/6

Part to Part



Ratio of red to blue $\frac{3}{4}$

Part to Whole



Ratio of red to all $\frac{3}{7}$

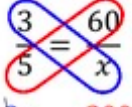
Equivalent Ratios

$$\frac{2}{3} = \frac{4}{6} = \frac{6}{9} = \frac{8}{12} = \frac{10}{15}$$

Proportions

$$\frac{3}{5} = \frac{60}{x}$$

Solve for x. Cross Multiply!



$$3x = \frac{300}{3}$$

$$x = 100$$

A Unit Rate tells the rate in lowest terms or the amount for one.

90 miles


5 hours

=


18 miles

1 hour

Scale Drawing



? ft



8.5 in

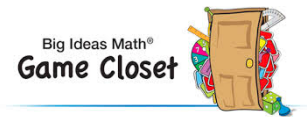
scale: 2 in to 5 ft

$$\frac{2 \text{ in}}{5 \text{ ft}} = \frac{8.5 \text{ in}}{\underline{\hspace{1cm}}}$$


Parents as Partners

Below is a link to a parent letter explaining more about this Chapter.

[Chapter 05](#)



Games to Play At Home

Below are links to games to play at home to review skills covers in the Chapter.



TSD Competencies

TSD Middle School Graduation Competency #2

The student reasons, describes and analyzes quantitatively using units and number systems to make sense of and solve problems.

Performance Indicator A

Understand and analyze ratio concepts and use ratio reasoning to solve problems.

TSD Middle School Graduation Competency #3

The student creates, interprets, uses, and analyzes patterns of algebraic structures to make sense of problems.

Performance Indicator C

Represent and analyze quantitative relationships between dependent and independent variables.

Performance Indicator G

Understand the connections between proportional relationships, lines, and linear equations.

Performance Indicator I

Analyze proportional relationships and use them to solve real-world and mathematical problems.

TSD Middle School Graduation Competency #4

The student uses functions to interpret and analyze a variety of contexts. Functions describe situations where one quantity determines another.

Performance Indicator A

The student can use functions to model relationships between quantities.

TSD Middle School Graduation Competency #5

The student proves, understands, and models geometric concepts using appropriate tools, theorems and constructions to solve problems and apply logical reasoning.

Performance Indicator B

The student can draw, construct and describe geometrical figures and describe the relationships between them.

Performance Indicator C

The students can understand congruence and similarity using physical models, transparencies, or geometry software.

Standards

[CCSS.MATH.CONTENT.7.RP.A.1](#)

Compute unit rates associated with ratios of fractions, including ratios of lengths, areas and other quantities measured in like or different units.

[CCSS.MATH.CONTENT.7.RP.A.2](#)

Recognize and represent proportional relationships between quantities.

[CCSS.MATH.CONTENT.7.RP.A.3](#)

Use proportional relationships to solve multistep ratio and percent problems. Examples: simple interest, tax, markups and markdowns, gratuities and commissions, fees, percent increase and decrease, percent error.



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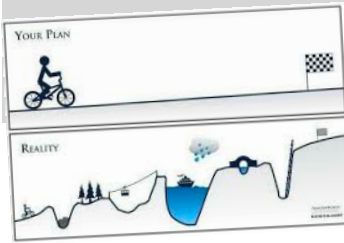
Khan Academy Practice

Click below to get to the Khan Academy page to support current concepts being addressed.

[7.RP Khan Academy Practice](#)

[7.G.1 Khan Academy Practice](#)

2.5- Calendar Teacher's Pace

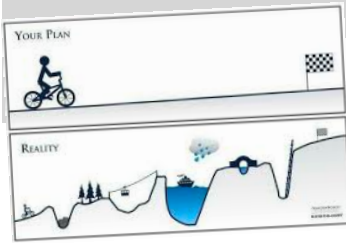


If plan “A” didn’t work out. The alphabet has 25 other letters! Stay cool. - The Dream House Project

The following calendar lays out the “Teacher’s Pace” of the class. It is posted in the classroom and students will track their personal progression through the unit. Reality constantly changes the plans so please touch base with your child regularly (ask them to snap a pace photo) to show you where they are on the progression compared to the teacher’s pace.

Day 1	Day 2	Day 3	Day 4
Chapter 5 Pre-Test	Chapter Opener — STEAM Video — Chapter Exploration	5.1 Ratios and Ratio Tables INB Page (Lesson Day)	5.1 Ratios and Ratio Tables (Examples and Practice Day)
Homework: Watch Videos linked below		Homework: Online Practice Questions	
Day 5	Day 6	Day 7	Day 8
5.2 Rates and Unit Rates INB Page (Lesson Day)	5.2 Rates and Unit Rates (Examples and Practice Day) Quiz over Learning Target 1	5.3 Identifying Proportional Relationships INB Page (Lesson Day)	5.3 Identifying Proportional Relationships (Examples and Practice Day) Quiz over Learning Target 2
Homework: Online Practice Questions		Homework: Online Practice Questions	
Day 9	Day 10	Day 11	Day 12
5.4 Writing and Solving Proportions INB Page (Lesson Day)	5.4 Writing and Solving Proportions (Examples and Practice Day) Quiz over Learning Target 3	5.5 Graphs of Proportional Relationships INB Page (Lesson Day)	5.5 Graphs of Proportional Relationships (Examples and Practice Day) Quiz over Learning Target 4
Homework: Online Practice Questions		Homework: Online Practice Questions	
Day 13	Day 14	Day 15	Day 16
5.6 Scale Drawings (Lesson Day)	5.6 Scale Drawings (Examples and Practice Day)	Chapter Review Connecting Concepts, Graphic Organizers, Practice Test, Chapter Self Assessment.	Chapter 5 Test
Homework: Online Practice Questions			

2.0- Calendar Teacher's Pace



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Day 1	Day 2	Day 3	Day 4
Chapter 5 Pre-Test	Chapter Opener — STEAM Video — Chapter Exploration	5.1 Ratios and Ratio Tables INB Page (Lesson Day)	5.1 Ratios and Ratio Tables (Examples and Practice Day)
Homework: Watch Videos linked below		Homework: Page 187 (1-7all, 8-24even)	Homework: Online Practice Questions
Day 5	Day 6	Day 7	Day 8
5.2 Rates and Unit Rates INB Page (Lesson Day)	5.2 Rates and Unit Rates (Examples and Practice Day) Quiz over Learning Target 1	5.3 Identifying Proportional Relationships INB Page (Lesson Day)	5.3 Identifying Proportional Relationships (Examples and Practice Day)
Homework: Page 193 (1-5all, 7-21odd)	Homework: Online Practice Questions	Homework: Page 200 (1-12all, 13-27odd)	Homework: Online Practice Questions
Day 9	Day 10	Day 11	Day 12
5.3 Identifying Proportional Relationships (Examples and Practice Day) Quiz over Learning Target 2	5.4 Writing and Solving Proportions INB Page (Lesson Day)	5.4 Writing and Solving Proportions (Examples and Practice Day) Quiz over Learning Target 3	
Homework: Online Practice Questions	Homework: Page 208 (1-7all, 8-28 even)	Homework: Online Practice Questions	
Day 13	Day 14	Day 15	Day 16
5.5 Graphs of Proportional Relationships INB Page (Lesson Day)	5.5 Graphs of Proportional Relationships (Examples and Practice Day) Quiz over Learning Target 4		5.6 Scale Drawings (Lesson Day)
Homework: Page 215 (1-11all, 12-20even)	Homework: Online Practice Questions		Homework: Page 221 (1-8all, 9-19odd)
Day 17	Day 18	Day 19	
5.6 Scale Drawings (Examples and Practice Day)	Chapter Review Connecting Concepts, Graphic Organizers, Practice Test, Chapter Self Assessment.	Chapter 5 Test	
Homework: Online Practice Questions			

Chapter 05— Resources

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DEAR PARENTS



The family letter is a great resource for parents. Ideas of times to bring up mathematical concepts, ways to apply current concepts to real world experiences, questions to ask your child, and conversations pertaining to the current chapter.

[Click Here for this Chapter's Family Letter](#)



Sometimes students need additional help and resources at home. These are great ways for students to review skills from class or preview them before the lesson.

[Click Here for this Chapter's Reteach Resources](#)



Knowing the vocabulary words can make learning the math easier. Flash cards at home are a great way to review key vocabulary.

[Click Here for this Chapter's Vocabulary Flash Cards](#)

Section Notes	Videos		
5.1 Ratios and Ratio Tables	Writing and Interpreting Ratios <u>Video 1, Video 2</u>	Completing a Ratio Table <u>Video 1, Video 2</u>	Modeling Real Life <u>Video 1, Video 2</u>
5.2 Rates and Unit Rates	Finding Unit Rates <u>Video 1, Video 2</u>	Using a Unit Rate to Solve a Rate Problem <u>Video 1, Video 2</u>	Modeling Real Life <u>Video 1, Video 2</u>
5.3 Identifying Proportional Relationships	Determining Whether Ratios form a Proportion <u>Video 1, Video 2</u>	Using Cross Products <u>Video 1, Video 2</u>	Determining Whether Two Quantities are Proportional <u>Video 1, Video 2</u>
5.4 Writing and Solving Proportions	Solving Proportions Using Mental Math <u>Video 1, Video 2</u>	Solving Proportions Using Cross Products <u>Video 1, Video 2</u>	Writing and Solving a Proportion <u>Video 1, Video 2</u>
	Writing a Proportion <u>Video 1, Video 2</u>	Solving Proportions Using Multiplication <u>Video 1, Video 2</u>	Modeling Real Life <u>Video 1, Video 2</u>
5.5 Graphs of Proportional Relationships	Determining Whether Two Quantities are Proportional <u>Video 1, Video 2</u>	Finding a Unit Rate from a Graph <u>Video 1, Video 2</u>	Modeling Real Life <u>Video 1, Video 2</u>
5.6 Scale Drawings	Finding an Actual Distance <u>Video 1</u>	Finding a Scale Factor <u>Video 1, Video 2</u>	Modeling Real Life <u>Video 1, Video 2</u>



Tools for Review: These are links to resources for studying at home for the chapter test.

[Graphic Organizers](#)

(Students are able to use on the test, must be hand written not printed)

[Practice Test and Answers](#)

[Cumulative Practice and Answers](#)

Everything [Purple, Bold, and Underlined is a link to a resource for students and/or Parents/Guardians.](#)