

5 Math Unit 15: Analyze Patterns and Relationships

Content Area: **Mathematics**
Course(s):
Time Period: **May**
Length: **2 weeks**
Status: **Published**

Unit Overview

Students extend their Grade 4 pattern work by working briefly with two numerical patterns that can be related and examining these relationships within sequences of ordered pairs and in the graphs in the first quadrant of the coordinate plane. This work prepares students for studying proportional relationships and functions in middle school.

How can number patterns be analyzed and graphed? How can number patterns and graphs be used to solve problems?

Goal

To analyze numerical patterns and graph ordered pairs generated from number sequences.

Students will be able to...

analyze numerical patterns and graph relationships

Standards

MA.5.G.A.2	Represent real world and mathematical problems by graphing points in the first quadrant of the coordinate plane, and interpret coordinate values of points in the context of the situation.
MA.5.OA.B.3	Generate two numerical patterns using two given rules. Identify apparent relationships between corresponding terms. Form ordered pairs consisting of corresponding terms from the two patterns, and graph the ordered pairs on a coordinate plane.

Materials

- [EnVision Math](#)
- 15-1 Numerical Patterns
- 15-2 More Numerical Patterns
- 15-3 Analyze and Graph Relationships
- 15-4 Math Practices and Problem Solving: Make Sense and Persevere
- [ST Math](#)
- [Happy Numbers](#)
- [3 Act Lessons](#)
- [Building Fact Fluency Kit](#)
- [Brainiaccamp Manipulatives](#)
- [Nearpod Lessons](#)
- [Brainpop Resources](#)

- [Math Diagnosis and Intervention System](#)
- [Online Resources](#)

Technology

- 8.1.5.A.1,2,4 (solve problems, word processing, databases, spreadsheets)
- 8.1.5.F.1 (digital tools to support scientific finding)
- 8.2.5.C.1,2,3 (solve problems, troubleshoot repair tools)

Assessment

Formative Assessment

- Teacher Observation
- Daily Quick Check
- Quizzes
- Exit Tickets

Summative Assessment

- Topic Tests
- Benchmark Tests
- Alternative Assessments: Performance Tasks & Projects

Accommodations & Modifications

Special Education

- Follow IEP Plan which may contain some of the following examples...
- In class/pull out support with special ed teacher
- Additional time during intervention time
- Preferred seating
- Questions read aloud
- Extended time for completing tasks
- Graphic organizers
- Vocabulary support
- Mnemonic devices
- Songs/videos to reinforce concepts

- Limit number of questions
- Scribe
- Manipulatives
- Calculators
- Reteach pages
- Leveled homework
- Lesson intervention activities
- Math Diagnosis & Intervention System
- Another look homework video
- Practice buddy

504

- In class/pull out support with special ed teacher Additional time during intervention time
- Preferred seating
- Questions read aloud
- Extended time for completing tasks Graphic organizers
- Vocabulary support Mnemonic devices
- Songs/videos to reinforce concepts Limit number of questions
- Scribe Manipulatives Calculators Reteach pages Leveled homework
- Lesson intervention activities
- Math Diagnosis & Intervention System Another look homework video
- Practice buddy

ELL

- Translation device/dictionary
- In class/pull out support with ESL teacher
- Preferred seating
- Questions read aloud
- Extended time for completing tasks
- Graphic organizers
- Vocabulary support
- Mnemonic devices
- Songs/videos to reinforce concepts
- Manipulatives
- Math Diagnosis & Intervention System

At-risk of Failure

- Additional time during intervention time
- Questions read aloud
- Graphic organizers
- Vocabulary support
- Mnemonic devices
- Songs/videos to reinforce concepts
- Manipulatives
- Calculators
- Reteach pages
- Leveled homework
- Lesson intervention activities
- Math Diagnosis & Intervention System

- Another look homework video
- Practice buddy

Gifted & Talented

- Independent projects
- Enrichment pages
- Online games
- Leveled Homework
- Extension Activities
- Today's Challenge

Interdisciplinary Connections

Topic 1 Math and Science Project - Using different presentations tools, students will collect different types of paper. Talk about the uses of paper. Tell how strong each type of paper is. Tell how the paper feels. Tell if the paper can soak up water.

ELA:

NJSLSA.R10. Read and comprehend complex literary and informational texts independently and proficiently with scaffolding as needed.

Science:

3-5-ETS1-2. Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.

21st Century Life Literacies & Key Skills

Critical Thinking and Problem Solving:

Problem-solving activities starting with the lesson "Solve and Share" and ending with higher order thinking questions that utilize the mathematical practices

Communication and Collaboration:

Throughout the lesson, students are provided with opportunities to discuss their ideas as they investigate mathematical concepts.

Creativity:

Students have opportunities to express their creativity by solving problems their own way, participating in performance

tasks, and group projects.

Technology:

Use of iPads, instructional apps, lab materials embedded in lessons. Programs such as BrainPop, Math Reflex, Google Slides are used to support instruction.

Career Ready Practices

- CRP1. Act as a responsible and contributing citizen and employee.
- CRP2. Apply appropriate academic and technical skills.
- CRP4. Communicate clearly and effectively and with reason.
- CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.
- CRP12. Work productively in teams while using cultural global competence.