BreakFree EDUCATION

Uncharted: Day 2

Lesson objective:
Students will be able to: • Recognize the aspects of a coordinate plane and solve for lengths between points using the Pythagorean Theorem • Understand the Distance Formula as a derivative of the Pythagorean Theorem • Solve for distances using the Distance Formula and coordina
Assessment:
• Exit questions • Students will turn in their worksheet
Key Points:
• In this lesson, Students will learn the concept of the Distance Formula and understand it as a derivative of the Pythagorean Theorem.

Component:	Teacher & Student Actions	Materials
Warm-Up or Hook [5 min]	• Do Now	Day 2 Handouts or blank paper
Review [5 min]	• Teacher will review key concepts from lesson 1	Slides
Introduction of New Material [15 min]	• Teacher will show how the pythagorean theorem can be used for solving distance, review elements of a coordinate plane, and introduce the distance formula • Teacher will play a short Khan Academy video reviewing the distance formula	Slides
Guided Practice [15 min]	• Teacher will work through an example using the distance formula	Slides
Independent Practice [15 min]	• Students will work independently or in groups to complete the distance formula worksheet • If time permits, the class will review their answers to the worksheet	Day 2 Handouts Answers in slides Calculators

Closing [5 min]	● Exit Ticket ● Ask students to complete their Daily Learning Log	[Daily Learning Logs](#)

Differentiation Considerations:

- Support during worksheet activity
- Working in groups during the worksheet activity, if necessary

Standard(s):

Common Core Standards

- **CCSS.MATH.CONTENT.HSG.GPE.B.7** Use coordinates to compute perimeters of polygons and areas of triangles and rectangles, e.g., using the distance formula.
- **CCSS.MATH.CONTENT.HSG.GPE.B.4** Use coordinates to prove simple geometric theorems algebraically.
- **CCSS.MATH.PRACTICE.MP1** Make sense of problems and persevere in solving them.
- **CCSS.MATH.PRACTICE.MP2** Reason abstractly and quantitatively.
- **CCSS.MATH.PRACTICE.MP3** Construct viable arguments and critique the reasoning of others.
- **CCSS.MATH.PRACTICE.MP4** Model with mathematics.
- **CCSS.MATH.PRACTICE.MP5** Use appropriate tools strategically.
- **CCSS.MATH.PRACTICE.MP6** Attend to precision.
- **CCSS.MATH.PRACTICE.MP7** Look for and make use of structure.
- **CCSS.MATH.PRACTICE.MP8** Look for and express regularity in repeated reasoning.