



**TEACHER PAGE**  
**Lesson: Distance Formula**  
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**New Arizona Math Strand 4 Geometry and Measurement**                      **Grades 9-12**  
**Articulated 4MH3-07** Determine the distance between two points in the coordinate system.

**Old Arizona Math Standard 4 Geometry Proficiency 2**                      **Grades 9-12**  
**4MP2-PO6** Determine the distance and midpoint between points within a coordinate system representative of a practical application.

**Pre-requisite Information**

The student should be familiar with the coordinate system.

**Learning objectives:** the student will be able to:

- use subscripted variables
- identify the ordered pair for a point in the coordinate system
- recognize the formula for finding the distance between two points
- find the distance between two points

**Overview:**

This is a step-by-step process lesson focusing on working with the formula for determining the distance between two points. The lesson moves deliberately through several examples and provides needed time to determine the calculations. The student cannot move forward in the lesson without determining the correct answers. Because of technical issues, subscripted numbers cannot be entered into the TRY section. Substitute “ $X_1$ ” with “X1.”

**Classroom Management:**

This can be used in large group lessons, small group, or individual assignments. Each student will move through the lesson at differing speeds.

**Engaging Students:**

Relate finding the distance between two points to finding the length of the hypotenuse of a right triangle.

**Follow-up:**

Take advantage of the following opportunities. The DIG DEEPER section questions a fact that light always travels in a straight line. In SO WHAT the question of origin and destination connect to the lesson. In TALK ABOUT IT students tackle a globe and map activity.

**Assessment:**

Multiple-choice questions must be correctly responded to in order to finish the lesson

