

Distance Formula

Content Standards:

- Apply the distance formula
- Use the Pythagorean Theorem and its converse.

Process Standards:

- Collaborate with partners/small groups.
- Explain thought processes when solving a problem.

Task:

Students will be given a worksheet in which they must apply the distance formula. For some problems, students will be expected to explain in words how they completed the problem.

Criteria:

- Students answer problems correctly
- Student shows all necessary work
- Students explain all writing prompts clearly
- Students create a good problem on their own

Honors Geometry
Distance Formula

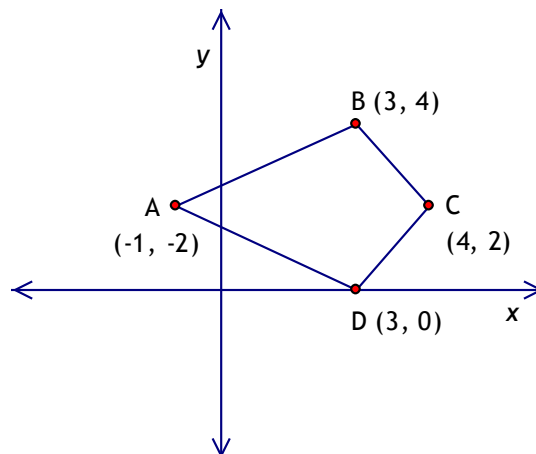
Name _____
Date _____ Pd. _____

1. Find the distance between the points $(-3, -6)$ and $(1, -2)$.

- 2a. A quarterback throws a football from a position that is 10 yards from the goal line and 15 yards from the sideline. His receiver catches it at a position that is 50 yards from the same goal line and 5 yards from the same sideline. Find the distance of the throw.

- 2b. Explain how you created the two points in order to find the distance.

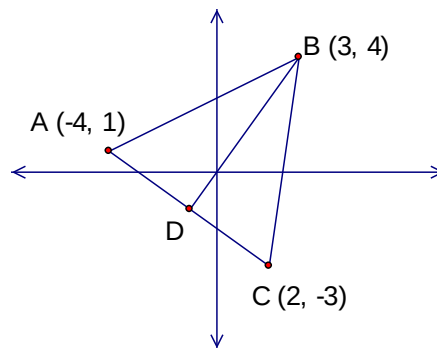
3. Given: $ABCD$ is a kite
Find the perimeter of the kite.



4a. Determine whether the points $(0, 4)$, $(2, -2)$, and $(5, -1)$ are the vertices of a right triangle.

4b. Explain why or why not the triangle is a right triangle. Include an explanation of all your steps to find out.

5. Given: $\overline{BD}$ is a median.
Find the coordinates of D.



6. Create your own problem using the distance formula that you think should be on the next test. Explain why you think I should put it on the test.

Rubric

Criteria	Poor	Good	Excellent
Problems answered correctly	0 - 1 problem answered correctly (0 - 1 pts)	2 - 3 problems answered correctly (2 - 3 pts)	4 - 5 problems answered correctly (4 - 5 points)
Work shown	No work shown (0 pts)	Some work shown (1 - 2 pts)	All work shown (3 pts)
Explanations of solutions	No explanation or explanation doesn't make sense (0 - 1 pts)	Explanations written but missing steps (2 pts)	All explanations written correctly (3 pts)
Created problem	No problem created (0 pts)	Problem created, but not solvable or not challenging (1 pt)	Created a solvable and challenging problem (2 pts)

Total _____/13