Grade 7/8 Math **Plotting and Pythagorean Theorem Work**

Name: _____ Class: _____ Date: _____

On the Cartesian Plane provided, plot the following points:

A(5, 17)	B(5, 5)	C(-11, 17)
D(-11, 5)	E(-6, 5)	F(-11, -3)
G(5, -3)	H(13, -3)	I(13, -10)

***Make sure you are labelling each point with the letter and the coordinate pair.**

1) Find the distance for each of the segments

AB - _____ BD - _____

Now, use a folded copy of the Cartesian Plane and use it as a ruler to find the distance of AD - _____. Now, use the Pythagorean Theorem to calculate the AD distance (use AB distance for A and BD distance for B to get C).

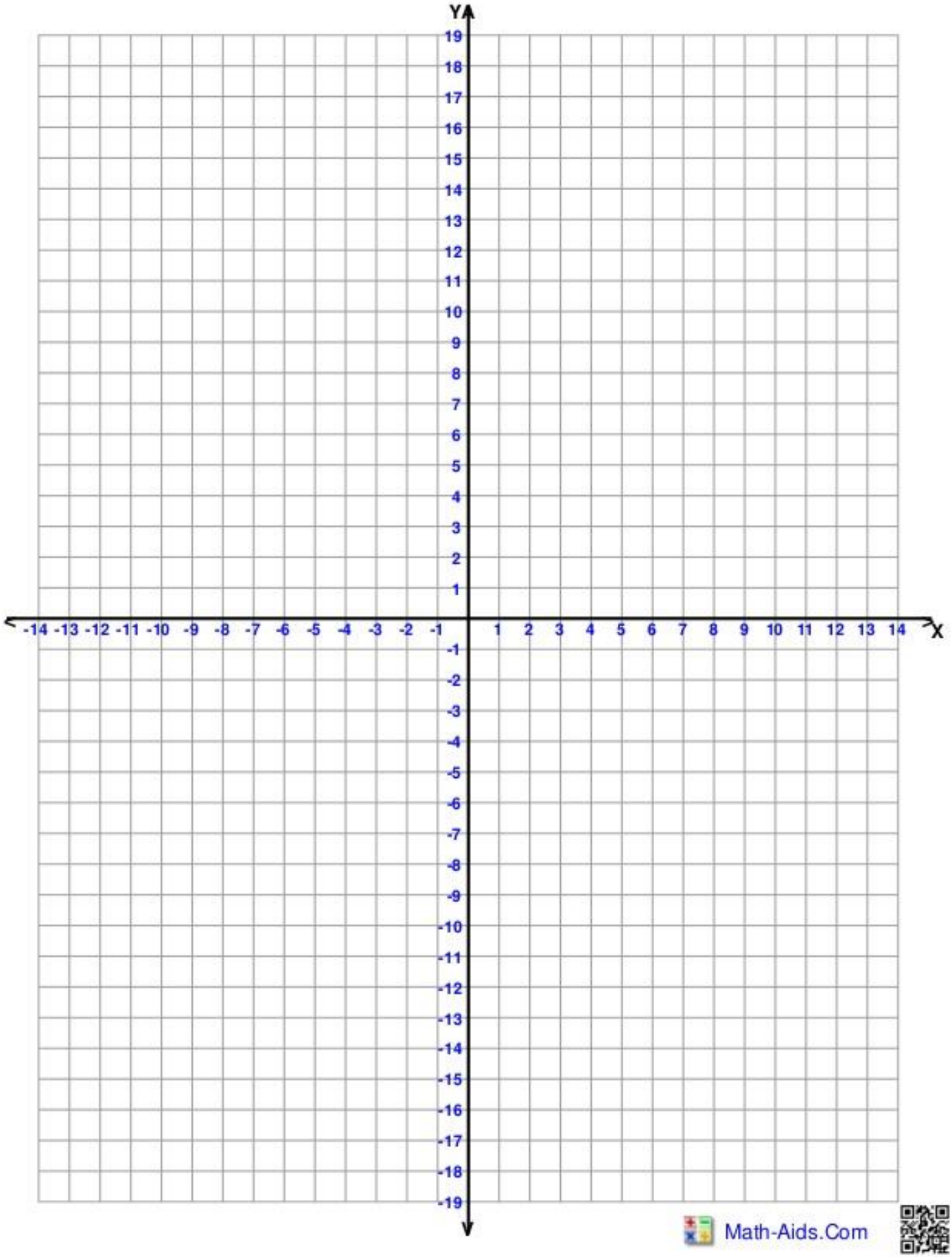
AD_{Pyth} - _____.

2) Find the distance for each of the segments

CD - _____ DE - _____

Now, use a folded copy of the Cartesian Plane and use it as a ruler to find the distance of CE - _____. Now, use the Pythagorean Theorem to calculate the AD distance (use CD distance for A and DE distance for B to get C).

CE_{Pyth} - _____.



3) Find the distance for each of the segments

FH - _____ HI - _____

Now, use a folded copy of the Cartesian Plane and use it as a ruler to find the distance of FI - _____. Now, use the Pythagorean Theorem to calculate the AD distance (use HI distance for A and FH distance for B to get C). FI_{Pyth} - _____.

These show how the Pythagorean Theorem is accurate in calculating the hypotenuse of a right triangle.

Use this to calculate the distance between any two points on the Cartesian Plane.

Find the distance between each of these points:

CB - _____ Show your work here: $A^2 + B^2 = C^2$

(use the horizontal and vertical differences to get A and B)

AF - _____

CI - _____