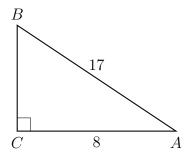
## 8.7 Classwork: Distance formula and Pythagorean theorem

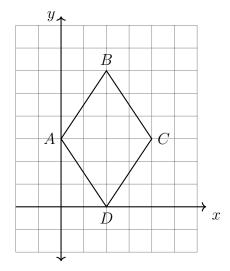
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1. In the diagram below of right triangle ABC, AC = 8, and AB = 17. Find the length BC using the Pythagorean theorem.



2. What is the distance between the points (3,4) and (6,8)?

3. Show that quadrilateral ABCD is a rhombus by calculating the lengths of its sides.  $A(0,3),\,B(2,6),\,C(4,3),\,D(2,0)$ 



4. Rhombus STAR has vertices S(-1,2)4, T(2,3), A(3,0), and R(0,-1). What is the perimeter of rhombus STAR?

5. The hypotenuse of right triangle ABC is the radius of a circle centered at the origin, as shown. Use the lengths of the legs of the triangle and the Pythagorean formula to calculate the radius of the circle.

