

Additional Practice

Investigation 1

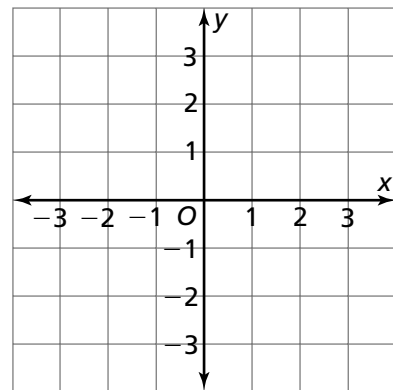
Looking for Pythagoras

For Exercises 1–3, refer to the map on the following page.

1. Which landmarks are 5 blocks apart by car?
2. The taxi stand is 5 blocks by car from the hospital and 5 blocks by car from the police station. Give the coordinates of the taxi stand.
3. The airport is halfway between City Hall and the hospital by helicopter. Give the coordinates of the airport.
4. Let a right triangle with vertices at $(0, 0)$, $(1, 0)$ and $(0, 1)$ be the unit for measuring area in the following questions.

a. Draw a square with vertices $(0, 1)$, $(1, 0)$, $(0, -1)$, and $(-1, 0)$. What is the area of this square in the triangle units described above?

b. Draw a square around the square you made in part (a) with two of the vertices at $(1, 1)$ and $(-1, 1)$. What are the other two vertices? What is the area of this square in triangle units?



c. Draw the square of the next size. One of its vertices is $(0, -2)$. What are the other three vertices? What is the area of this square in triangle units?

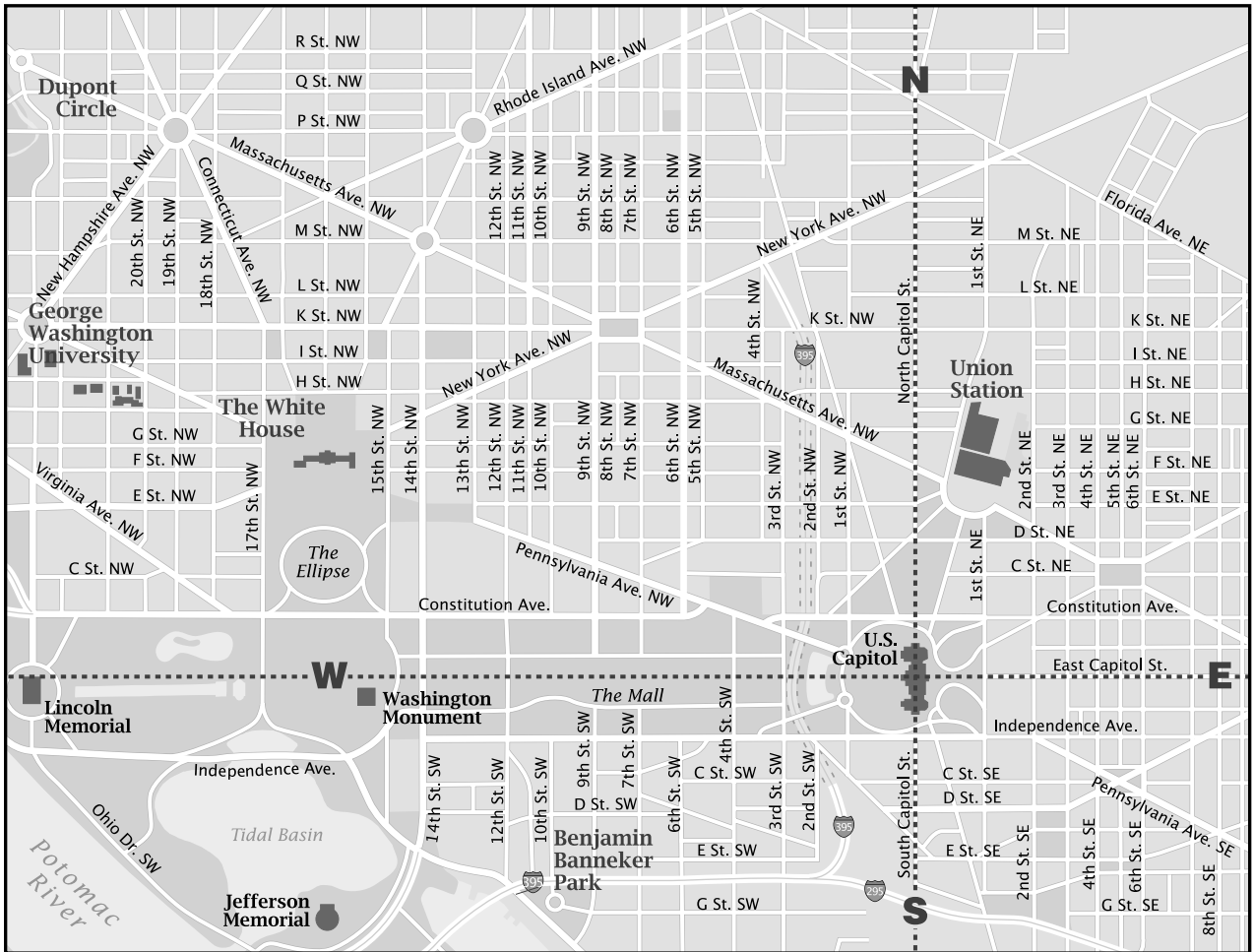
d. What are the four vertices of the square of the next size? What is its area in triangle units?

e. What do you notice about the areas of the squares, as the squares get larger?

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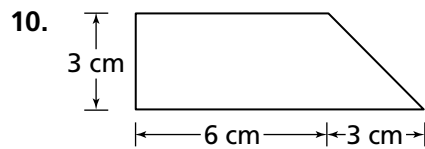
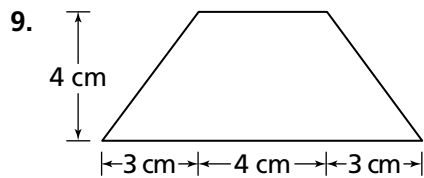
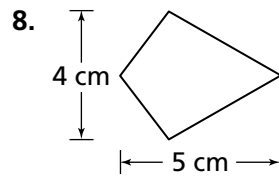
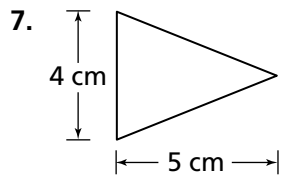
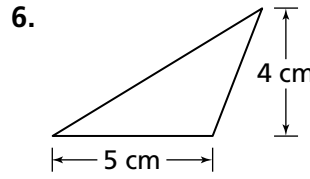
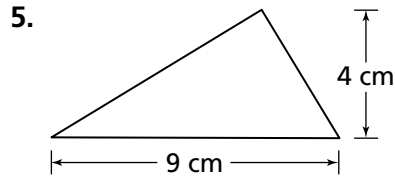


Additional Practice *(continued)*

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Looking for Pythagoras

For Exercises 5–10, use the given lengths to find the area of each figure. Show your calculations. Record which formulas you can use as part of your reasoning.



Additional Practice *(continued)*

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For Exercises 11–14, find the area of the figure. Explain our reasoning.

