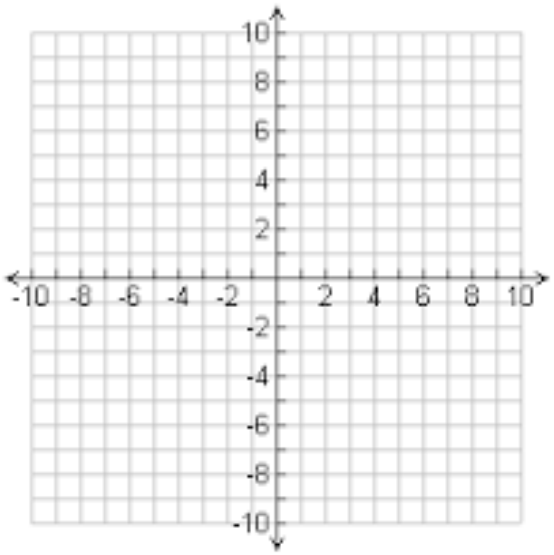
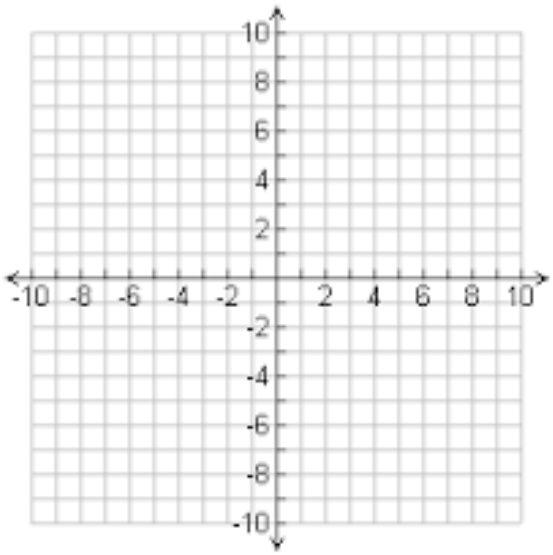
1-94. Augustin is in line to choose a new locker at school. The locker coordinator has each student reach into a bin and pull out a locker number. There is one locker at the school that all the kids dread! This locker, # 831, is supposed to be haunted, and anyone who has used it has had strange things happen to him or her! When it is Augustin's turn to reach into the bin and select a locker number, he is very nervous. He knows that there are 535 lockers left and locker # 831 is one of them. What is the probability that Augustin reaches in and pulls out the dreaded locker # 831? Should he be worried? Explain. Homework Help ✎

1-95. Lourdes has created the following challenge for you: She has given you three of the four points necessary to determine a rectangle on a graph. She wants you to find the points that "complete" each of the rectangles below. 1-95 HW eTool (Desmos). Homework Help ✎

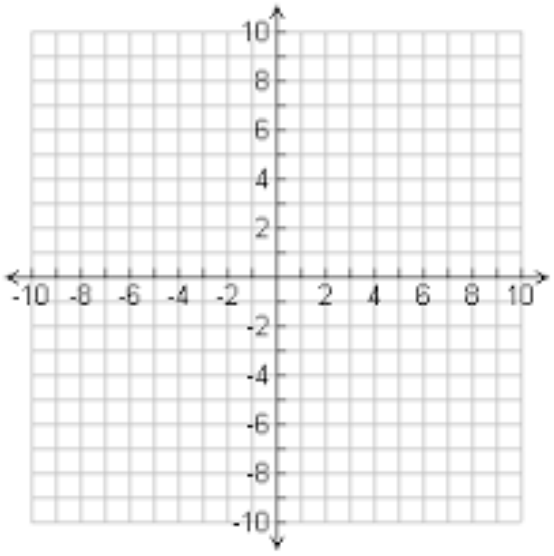
a. $(-1, 3)$, $(-1, 2)$, $(9, 2)$



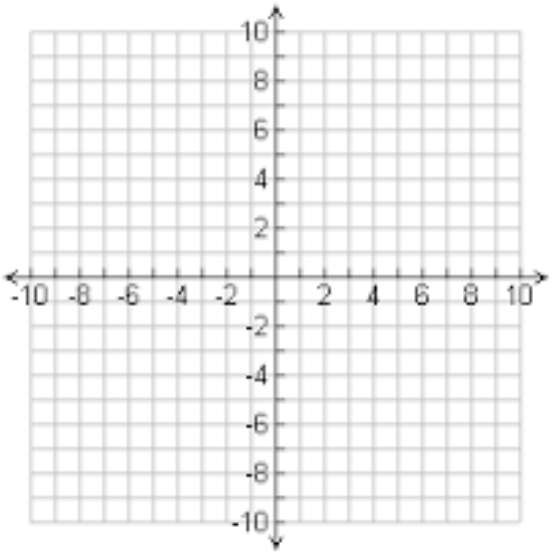
b. $(3, 7)$, $(5, 7)$, $(5, -3)$



c. (−5, −5), (1, 4), (4, 2)



d. (−52, 73), (96, 73), (96, 1483)



1-96. Find the area of the rectangles formed in parts (a), (b), and (d) of problem 1-95. Homework Help ✎

a. b. d.

START REVISING HERE! 1-97 has diagrams missing in the online textbook!!!

1-97. Graph the result when each indicated transformation is performed. 1-97 HW eTool (Desmos). Homework Help ✎

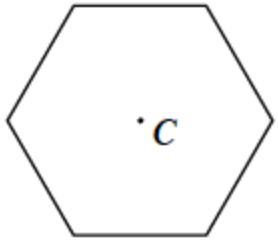
Reflect Figure A across line *l*.

Rotate Figure B 90° clockwise (↻) about point P.

Reflect Figure C across line *m*.

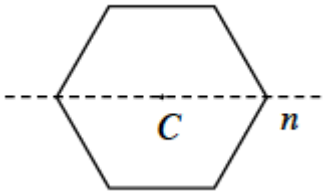
Rotate Figure D 180° about point Q.

1-98. Below is a diagram of a **regular hexagon** with center *C*. A polygon is regular if all sides are equal and all angles are equal. Copy this figure on your paper, then answer the questions below.
Homework Help ✎



Draw the result of rotating the hexagon about its center 180°. Explain what happened. When this happens, the shape has **rotation symmetry**.

What is the result when the original hexagon is reflected across line *n*, as shown below? A shape with this quality is said to have **reflection symmetry** and line *n* is a **line of symmetry** of the hexagon (not of the reflection).



Does a regular hexagon have any other lines of symmetry? That is, are there any other lines you could fold across so that both halves of the hexagon will match up? Find as many as you can.