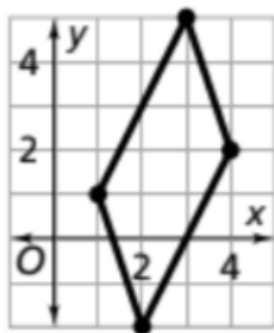


Answers to Homework Problems #'s 11-15

11. B
12. There are many possible vertices, including $(2, 3)$, $(3, 6)$, $(5, 7)$, $(1, 4)$, $(4, 5)$, $(0, 2)$, and $(6, 4)$. (See the answer to Exercise 13.)
13. An infinite number of right triangles can be drawn. The third vertex can be located at any grid point on the line that goes through $(0, 2)$ and $(6, 4)$ (the line $y = \frac{1}{3}x + 2$) or on the line that goes through $(-1, 5)$ and $(5, 7)$ (the line $y = \frac{1}{3}x + \frac{16}{3}$). Each of these lines is perpendicular to the segment connecting $(3, 3)$ and $(2, 6)$, so these lines create the right angle for the triangle. Some students may express this idea as follows: Imagine a line starting from one of the given points and at a right angle to the given side. Any point along that line can be the third vertex of the triangle.
14. Yes. Opposite sides have equal lengths and slopes.



15. 1 square unit each