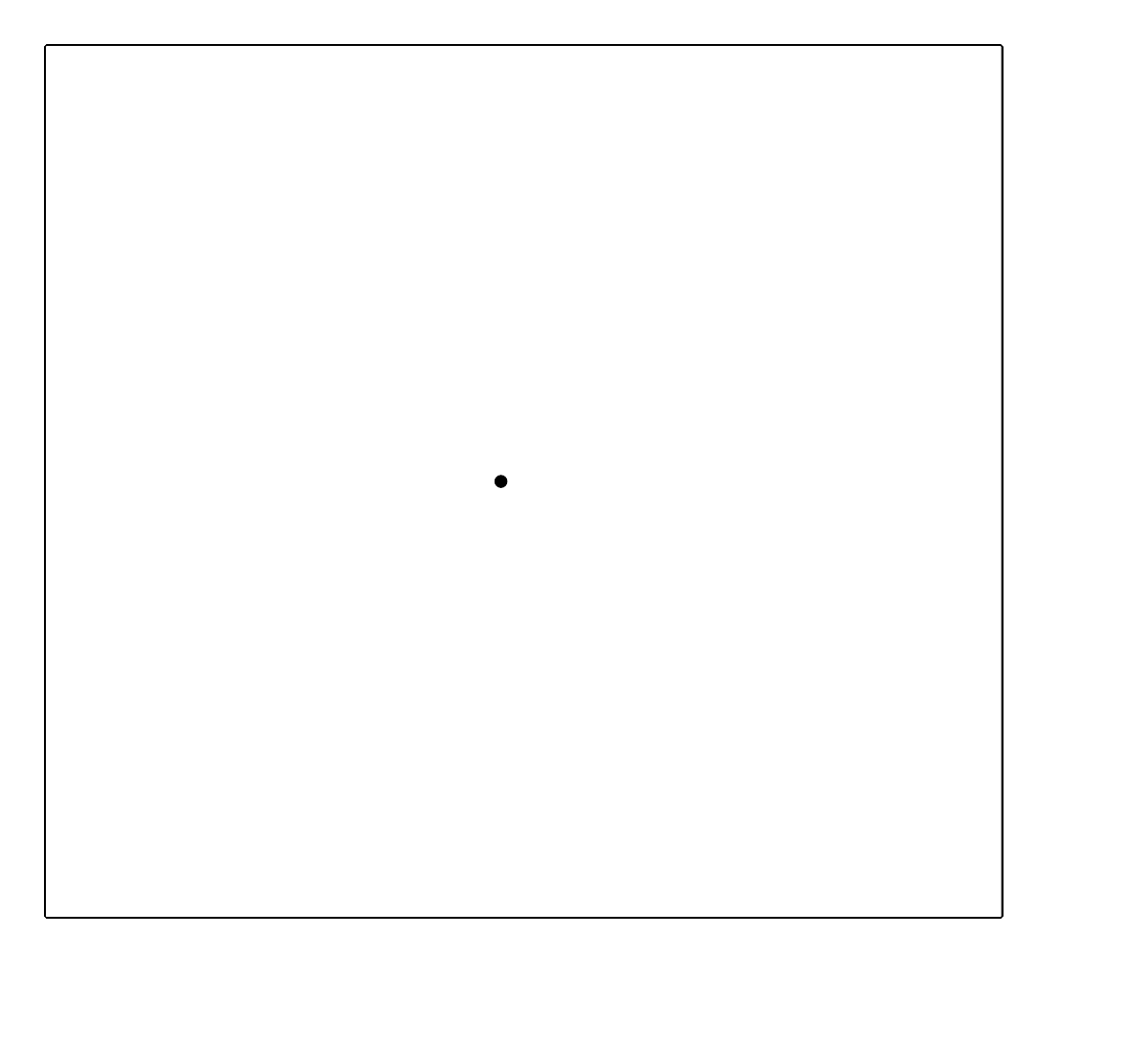
### Lesson 17 Practice Problems

1. The 3 lines  and intersect at point . Find the coordinates of . Verify algebraically that the lines all intersect at .
2. Triangle has vertices at  and . Kiran calculates the point of intersection of the medians using the following steps:
   1. Draw the triangle.
   2. Calculate the midpoint of each side.
   3. Draw the medians.
   4. Write an equation for 2 of the medians.
   5. Solve the system of equations.

* Use Kiran’s method to calculate the point of intersection of the medians.
* (From Unit 6, Lesson 16.)

1. Triangle and its medians are shown. Write an equation for median .

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* (From Unit 6, Lesson 16.)

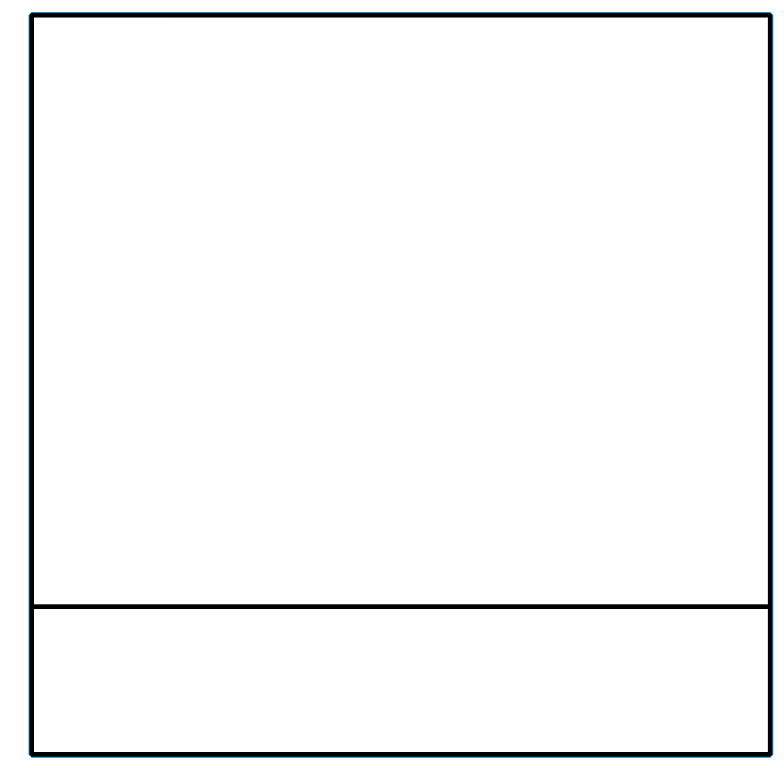
1. Given and , find the point that partitions segment in a ratio.

* (From Unit 6, Lesson 15.)

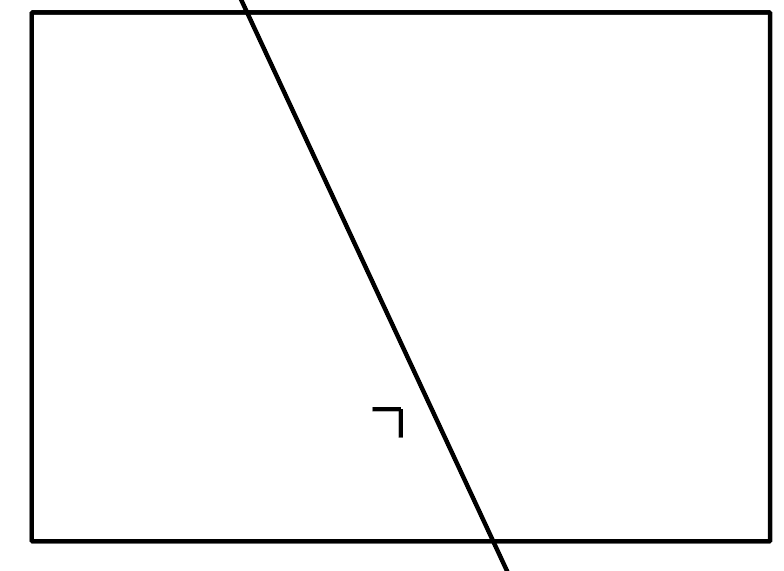
1. A quadrilateral has vertices  and . Mai thinks the quadrilateral is a rhombus and Elena thinks the quadrilateral is a square. Do you agree with either of them? Show or explain your reasoning.

* (From Unit 6, Lesson 14.)

1. The image shows a graph of the parabola with focus and directrix , and the line given by . Find and verify the points where the parabola and the line intersect.

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* (From Unit 6, Lesson 13.)

1. For each equation, is the graph of the equation parallel to the line shown, perpendicular to the line shown, or neither?

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* (From Unit 6, Lesson 12.)

1. Write 2 equivalent equations for a line with -intercept and -intercept .

* (From Unit 6, Lesson 9.)

1. Parabola A and parabola B both have the line as the directrix. Parabola A has its focus at and parabola B has its focus at . Select **all** true statements.
   1. Parabola A is wider than parabola B.
   2. Parabola B is wider than parabola A.
   3. The parabolas have the same line of symmetry.
   4. The line of symmetry of parabola A is to the right of that of parabola B.
   5. The line of symmetry of parabola B is to the right of that of parabola A.

* (From Unit 6, Lesson 7.)



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