

Grade 4 Math, May 18th Day 1

Standard: 4G1 Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.

Objective: *I can identify and draw lines, line segments and rays.*

Instructional learning video to support the objective:

- [Lesson- lines, line segments and rays](#) (Hold down Ctrl + Click to follow links in blue)
- [Identify Rays](#)

Practice Activities:

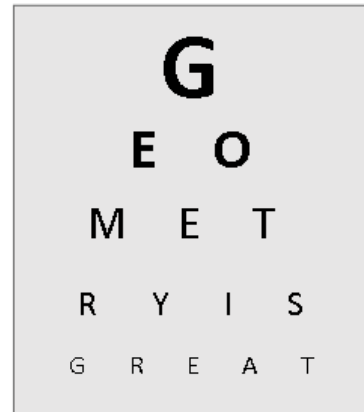
1. [Practice Identifying lines, line segments and rays](#)
[Practice drawing lines, line segments and rays](#)
2. Rays, Lines, Lines Segment and Rays worksheet (2 pages printable)
3. Fluency Practice:
<https://resources.finalsite.net/images/v1588007094/brockton/t9xc918juhe4i9kga8tg/MultiplicationFluencyGr3-5.pdf> **Focus on REALLY learning your multiplication facts. Practice your 3 tables (pg. 18-21) using the doubles plus 1 strategy.**
4. **NEW!! ONLINE PRACTICE: ST MATH Log on 30 MINUTES/DAY** (Log on through CLEVER)
5. **Problem of the Day**

Gigi went to see her eye doctor, Dr. Gerald, to have her annual eye exam. When Gigi looked at the eye chart, she remembered that letters can be made of line segments and arcs of circles. They can also have parallel lines and perpendicular lines.

Use the eye chart to answer the following questions:

Which letters have 1 line segment? 2? 3? 4? 0?

If you were to add up all of the line segments of all the letters that had only 1 or 2 line segments, how many line segments would you have altogether?



Game- Geometric Sort (printable)

Optional Enrichment: [Worksheet](#) (printable 1page) [Answer Key](#) (printable1 page)

Additional Online Resource:

- <https://mrnussbaum.com/lines-line-segments-and-rays-online>
- <https://www.mathgames.com/skill/4.2-lines-line-segments-and-rays>
- Imagine Math (via Clever)

Name _____

Date _____

Lines, Line Segments & Rays

- 1.** Draw line segment XY
- 2.** Draw line AB
- 3.** Draw ray EF
- 4.** Draw line AD. Then put points B and C on the line.
- 5.** Draw line segment VC
- 6.** Draw ray LM

Name _____

Date _____

Lines, Line Segments & Rays

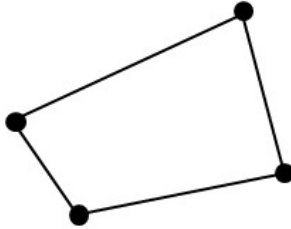
- 1.** Draw line segment GH
- 2.** Draw line XK
- 3.** Draw ray BW
- 4.** Draw line CP. Then put points F and L on the line.
- 5.** Draw line segment TZ
- 6.** Draw ray QS

Enrichment Lines, Line Segments and Rays

The students in Ms. Sun's class were drawing geometric figures. First she asked them to draw some points, and then she asked them to draw all the line segments they could that join two of their points.

a.

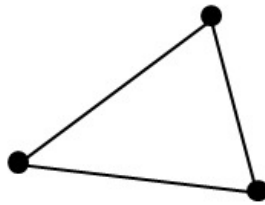
Joni drew 4 points and then drew 4 line segments between them:



Are there other line segments that Joni could have drawn?

b.

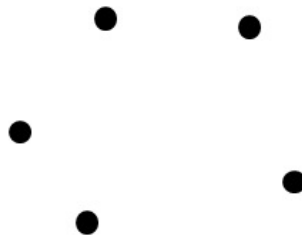
Tony drew 3 points and then drew 3 line segments between them:



Are there other line segments that Tony could have drawn?

c.

Here are 5 points. Draw all the line segments you can connecting pairs of them.



d. Starting with just two points, how many line segments can you draw between them?

e.

Tony decided that he could actually draw two line segments between two points, and maybe even more. This is what he drew:



What do you think of Tony's idea?

Name Answer Key

Date _____

Lines, Line Segments & Rays

1. Draw line segment XY



2. Draw line AB



3. Draw ray EF



4. Draw line AD. Then put points B and C on the line.



5. Draw line segment VC



6. Draw ray LM



Name Answer Key

Date _____

Lines, Line Segments & Rays

1. Draw line segment GH



2. Draw line XK



3. Draw ray BW



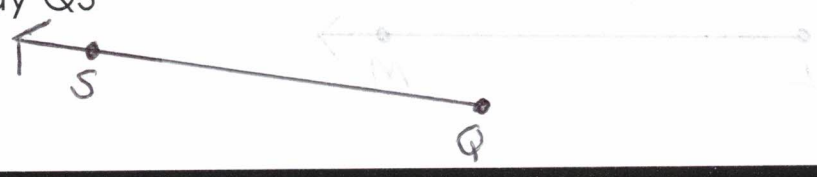
4. Draw line CP. Then put points F and L on the line.



5. Draw line segment TZ



6. Draw ray QS



Folded Geometry

Reporting Category Geometry

Topic Drawing representations of points, line segments, rays, angles, and lines

Primary SOL 3.15 The student will identify and draw representations of points, line segments, rays, angles, and lines.

Materials

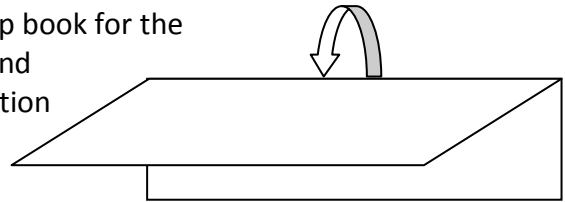
- 18 x 20 inch construction paper
- Scissors
- Geometry Sort Recording Sheet (attached)
- Cards for Geometry Sort (attached)

Vocabulary

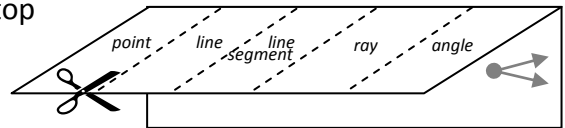
point, line, line segment, ray, angle, endpoint, vertex, vertices

Student/Teacher Actions (what students and teachers should be doing to facilitate learning)

1. Explain to students that they will be making a flip book for the geometry terms: *point, line, line segment, ray, and angle*. Distribute sheets of 18 x 20 inch construction paper and scissors. Have each student lay the sheet of paper horizontally and fold it in half horizontally, folding the top edge down to create a top flap.



2. Next, model for students and lead them in folding their papers vertically into thirds by folding the left and right thirds over, one on top of the other. Then, lead them to fold their papers again vertically in half. Ask students how many sections the papers will have when they are unfolded at the vertical folds. Have students unfold the vertical folds and cut off one of the sections because only five sections are needed to create the flip book. Next, have students cut along the four creases in the top flap up to the horizontal fold to create five top flaps. This creates the “flip” pages of the book.



3. Instruct students to write the five terms *point, line, line segment, ray, and angle* on the outside of the five top flaps and the meaning of each term on the underside of each flap. Then, have students draw each figure under each flap on the surface of the paper that was not cut.
4. Have students exchange flip books with partners and practice flipping the pages to match the terms with the meanings and drawings.

Assessment

- **Questions**
 - How is a ray different from a line segment?
 - How many points are on a line?

- **Journal/Writing Prompts**

- Look around the classroom for real-world objects that have line segments and angles. Draw a sketch of three examples, and label the line segments and angles.
- Draw a ray and a line segment. Write two statements that describe how these two figures are different.

- **Other**

- Have students place the attached Cards for Geometry Sort on the attached Geometry Sort Recording Sheet to identify points, line segments, rays, angles, and lines. Instruct students to explain their reasoning in the space at the bottom of each column.

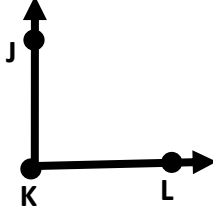
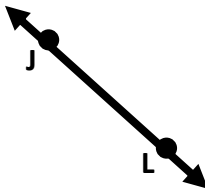
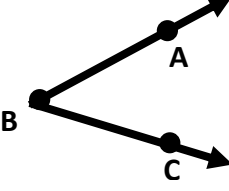
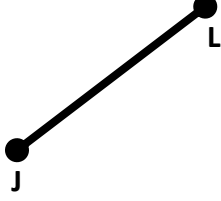
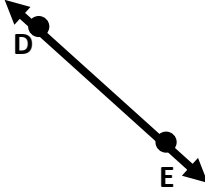
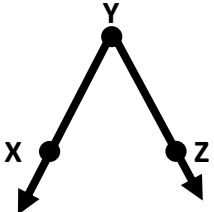

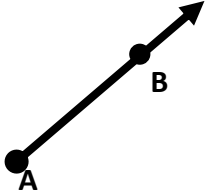
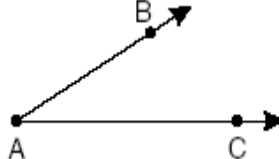


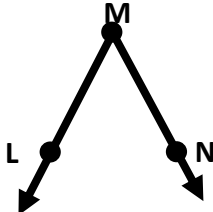
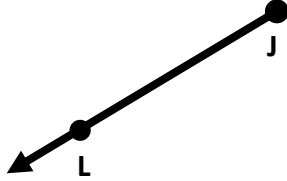
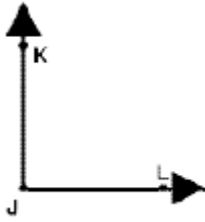
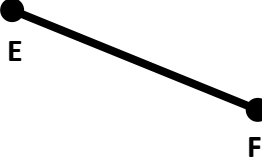
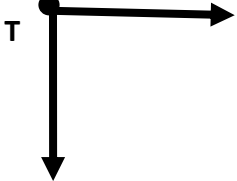

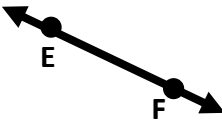
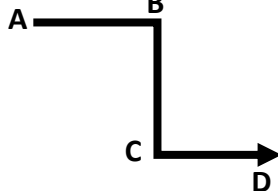
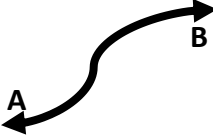
Geometry Sort Recording Sheet

Name: _____ Date: _____

Lines	Line Segments	Rays	Angles
How do you know?	How do you know?	How do you know?	How do you know?

Cards for Geometry Sort

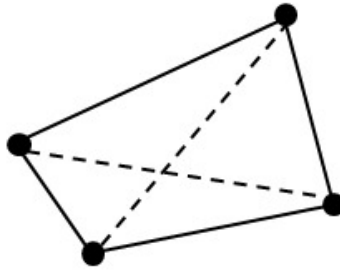
Copy cards on card stock, and cut out.

Enrichment Lines, Line Segments and Rays Answer Key

a.

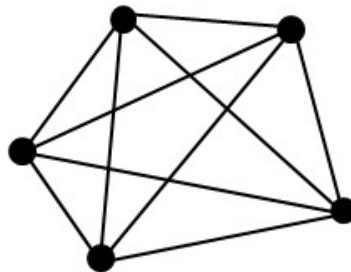
There are two more segments that Joni could draw:



b. Tony has drawn all the segments that are possible to draw between the three points.

c.

It is possible to draw 10 different line segments between these five points:



d. There is only one line segment joining any two points.

e.

Tony is right that there is more than one line segment joining the circles he has drawn to represent the points. A point has a location but no length or width, and there is only one straight path (aka a line segment) starting at the location indicated by one point and ending at the location indicated by a second point. However, there are lots of curved paths between two points; for example:

