Math 118 - Dr. Miller - Summary #2: Building Blocks of Geometry

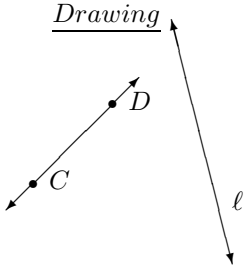
As we discuss the terminology for this lesson, write the term being defined in the blank for each statement. Draw the item and write its notation in the space provided.

1. **"Undefined" Terms:**

(a) A _____ is purely a location in space, without length, width, or height.

| *Drawing* | *Notation* |
|---|---|
| • $A$ | $A$ |

(b) A _____ is a set of points extending infinitely in two opposite directions.

| *Drawing* | *Notation* |
|---|---|
|  | $\overleftrightarrow{CD}$ <br> $\ell$ |



**BEWARE: Just because something doesn't "show" in a picture doesn't mean it doesn't exist! There IS a point where these lines will intersect; it's just not drawn right now.**

(c) A _____ is a set of points extending infinitely in length and width, but having no thickness.

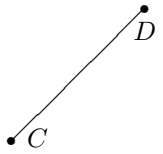
| *Drawing* | *Notation* |
|---|---|

(d) _____ is the set of all points, without boundary.

2. **Parts of Lines, and Their Creations:**

(a) A _____ is made up of 2 points on a line together with all points between them.

*Drawing*

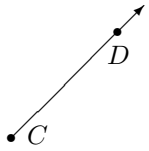



*Notation*

$\overline{CD}$

(b) A _____ is made up of 1 point on a line together with all points to one side of it (on the line).

*Drawing*



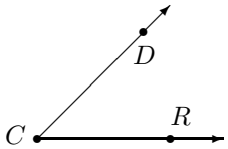

*Notation*

$\overrightarrow{CD}$

rarely $\overleftarrow{DC}$

(c) An _____ is the union of 2 rays having a common endpoint.

*Drawing*



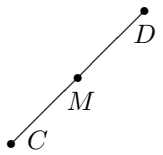

*Notation*

$\angle DCR$ or $\angle RCD$

handwritten:

(d) A _____ is a point that divides a line segment into two congruent halves.

*Drawing*

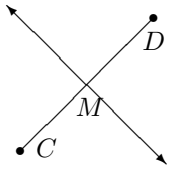



*Notation*

congruence markings required

(e) A _____ is a line perpendicular to a line segment that divides the segment into 2 congruent halves.

*Drawing*




*Notation*

congruence markings required

$90^o$ marking required

3. **Relationships of Lines and Points:**

(a) _____ are points that lie on the same line.

*Drawing*

(b) _____ are points that lie in the same plane.

*Drawing*

(c) _____ are lines that intersect at right angles.

*Drawing*

(d) _____ are three or more lines that intersect at exactly the same point.

*Drawing*

(e) _____ are lines in the same plane that do not intersect.

*Drawing*

(f) _____ are lines in different planes that do not intersect.

*Drawing*

4. **Parts of Angles:**

(a) The _____ is the shared endpoint of the two rays forming an angle.

*Drawing*

(b) The _____ are the two rays that form the angle.

*Drawing*

(c) An _____ is a ray that divides an angle into two congruent halves.

*Drawing*

5. **Pairs of Angles:**

(a) _____ are (two) angles whose measurements total $90^o$.

*Drawing*

(b) _____ are (two) angles whose measurements total $180^o$.

*Drawing*

(c) _____ are (two) angles that share a side but not their interiors.

*Drawing*

(d) Two angles that share a side and whose other sides extend to form a line are called

_____.

*Drawing*

(e) _____ are "opposing" angles formed by two intersecting lines.

*Drawing*

6. **Sizes of Angles:**

(a) A _____ is an angle measuring $0^o$.

*Drawing*

(b) A _____ is an angle measuring more than $0^o$ but less than $90^o$.

*Drawing*

(c) A _____ is an angle measuring exactly $90^o$.

*Drawing*

(d) A _____ is an angle measuring more than $90^o$ but less than $180^o$.

*Drawing*

(e) A _____ is an angle measuring exactly $180^o$.

*Drawing*

(f) A _____ is an angle measuring more than $180^o$ but less than $360^o$.

*Drawing*