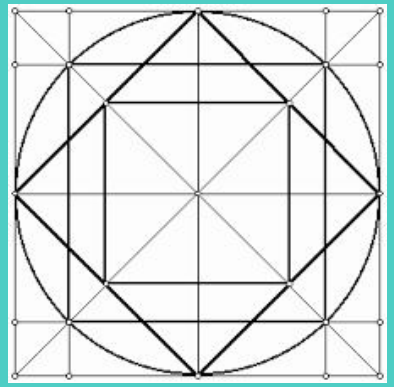
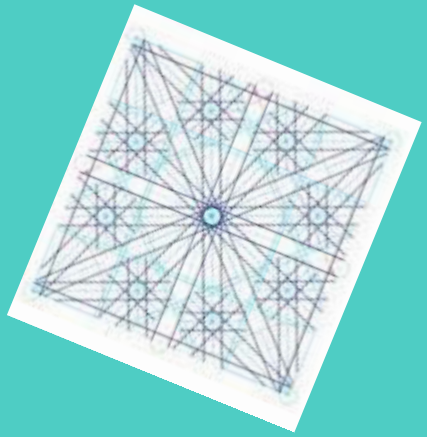
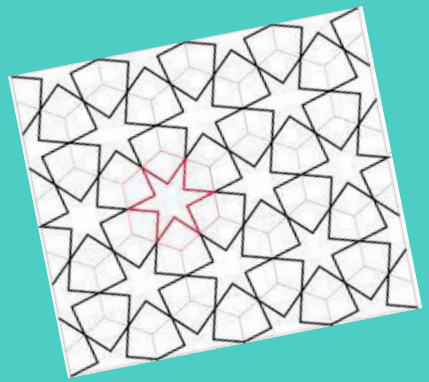




Lesson 2: Constructing Patterns



Lesson Summary

Constructing Geometric Patterns:

The tools to use are a straightedge and a compass.

What if someone else wants to make the same pattern?

***We need to communicate how to reproduce the pattern precisely.**

Compare these sets of instructions:

What makes these different?

1.	. Start with a line and 2 points.	Start with a line ℓ, point A on line ℓ and point B not on line ℓ.
2.	. Create a line.	Create a line through A and B extending in both directions. Label this line p.
3.	Create a circle.	Create a circle centered at A with radius AB. This circle intersects with line ℓ in 2 places. Label the intersection point to the right of A as C.

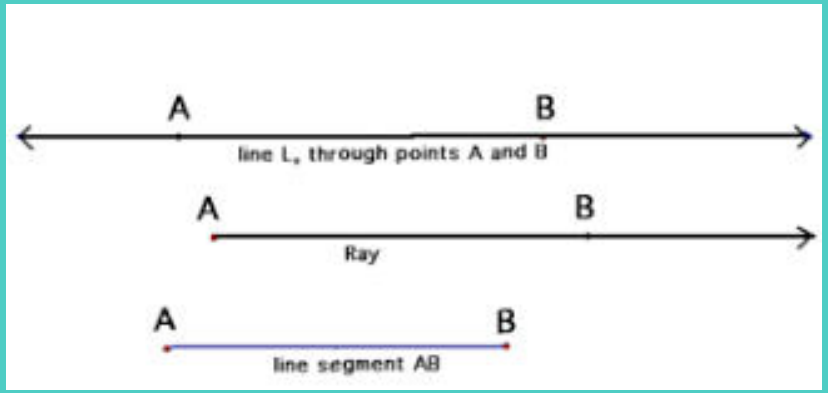
Compare these sets of instructions:

4.	Create a circle.	Create a circle centered at B with radius BA. This circle intersects with line p at A and 1 other point. Label the new intersection point as D.
5.	Create a circle.	Create a circle centered at D with a radius of length BC. This circle intersects with the circle centered at B in 2 places. Label the intersection point to the right of B as E.
6.	Create a line.	Create a line through B and E extending in both directions.

What makes these different?

It is important to label points and segments,

- such as point *A* or segment *AB* , to communicate precisely.



These are instructions to construct a line parallel to a given line.

Parallel lines:

- 2 lines are parallel if they don't intersect.
- 2 segments are parallel if they extend into parallel lines.