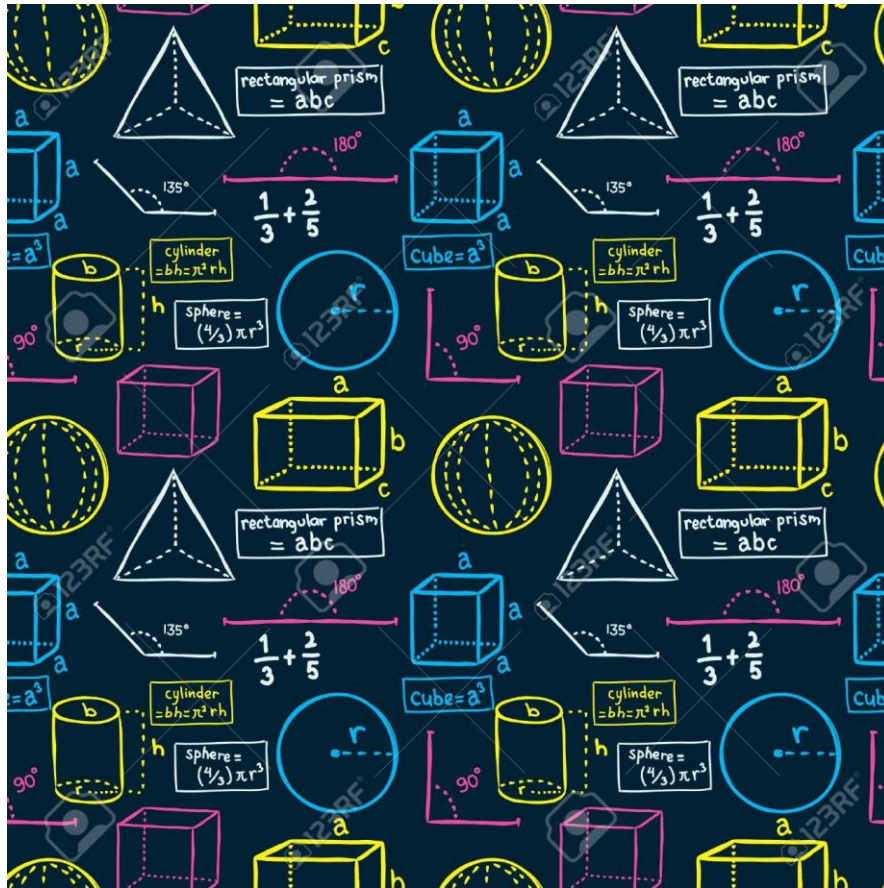


Geometry

Quarter Two (Pt 1)



"There is geometry in the humming of strings, there is music in the spacing of the spheres."

-Pythagoras

Overview

During the first half of this quarter, we will continue investigating transversals during specific conditions of the lines it intersects. You will find that this technique had very powerful connotations even thousands of years ago, where humanity was not only able to prove the earth was round, but also the size of its circumference. This is the basis of using Geometry to prove ideas that we cannot directly prove. We will then proceed with an introduction to triangles.

Lessons: Linear Systems and Matrices, Quadratic Equations

___ 3.3: Parallel Lines and Transversals	}	10/23 - 10/27
___ 3.4: Proving Lines and Parallels		
___ 3.5: Using Properties of Parallel Lines	}	10/30 - 11/3
___ 3.6: Parallel Lines in the Coordinate Plane		
___ 3.7: Perpendicular Lines in the Coordinate Plane	}	11/6 - 11/9
___ 4.1: Triangles and Angles		
___ 4.2: Congruence and Triangles	}	11/13 - 11/17

Individual/Group Work

Guiding question 4:

What are some consequences of having a transversal intersect two parallel lines?

- ___ 22) **Postulates/ Theorems:** On individual flash cards, write the following theorems. The front should be the postulate/theorem its definition, and the associated image. On the back, give a number example of it. Connect them with a ring (see me if you need one).
- ___ a. Corresponding Angles Postulate, Alternate Interior Angles, Consecutive Interior Angles, Alternate Exterior Angles, Perpendicular Transversal (p.143)
 - ___ b. Theorem 3.11 (Transitive Property of Parallel Lines), Theorem 3.12 (Transitive Property of Perpendicular Lines) (p.157)
- ___ 23) **Problem Sets:** You will find the problems in the textbooks in the classroom **OR** in the pdf form on Google Classroom. You must complete the whole set (and show your work) for full credit. Make sure you use the selected answers in the back of the book to check your work.
- ___ a. 3.3: Parallel Lines and Transversals (p. 146 #'s 9-29 odds, 33-43 odds)
 - ___ b. 3.4: Proving Lines and Parallels (p. 153 #'s 1-27 odds, 28, 41-47 odds)
 - ___ c. 3.5: Using Properties of Parallel Lines (p. 160 #'s 9-23 odds, 30, 43-51 odds)

___ 24) **Video: Estimating the Earth's Circumference:** Watch the video posted on google classroom to learn about how Eratosthenes estimated the earth's circumference. You will then take notes on the example about this estimation (ex 5 p.145) in order to understand how transversals helped.

___ 25) **Construction:** Complete the following construction activities and write out the steps for future reference.

___ a. "Copying an Angle" (p.159)

___ b. "Parallel Lines" (p.159)

___ 26) **ASSESSMENT:** Properties of Transversals Through Parallel Lines (3.3, 3.5, 3.6)
(Friday, November 3rd)

Guiding question 5:

How can we summarize a matrix as a single number, and what physical applications does this number have? How do you model an object's trajectory as it travels through the air?

___ 27) **Postulates/ Theorems:** On individual flash cards, write the following theorems. The front should be the postulate/theorem its definition, and the associated image. On the back, give a number example of it. Connect them with a ring (see me if you need one).

___ a. Postulate 17 (Slopes of Parallel Lines) (p.166)

___ b. Postulate 18 (Slopes of Perpendicular Lines) (p.172)

___ c. Thm 4.1 (Triangle Sum Theorem), Thm 4.2 (Exterior Angle Theorem), Corollary to the Triangle Sum Theorem (p.196-197)

___ d. Thm 4.3 (Third Angles Theorem p.203), Thm 4.4 (Properties of Congruent Triangles p.205)

___ 28) **Problem Sets:** You will find the problems in the textbooks in the classroom **OR** in the pdf form on Google Classroom. You must complete the whole set (and show your work) for full credit. Make sure you use the selected answers in the back of the book to check your work.

___ a. 3.6: Parallel Lines in the Coordinate Plane (p. 168 #'s 11-23 odds, 59-73 odds)

___ b. 3.7: Perpendicular Lines in the Coordinate Plane (p. 175 #'s 7-35 odds)

___ c. 4.1: Triangles and Angles (p. 198 11-25 odds, 31-39 odds)

___ d. 4.2: Congruence and Triangles (p. 206 #'s 5-25 odds, 41-53 odds)

___ 29) **Graphic Organizer: Types of Triangles** Complete the graphic organizer and staple into your notebook.

___ 30) **ASSESSMENT: Lines on a Plane, Intro to Triangles (3.6, 3.7, 4.1, 4.2)**
(Friday, November 17th)