

CP Geometry

Mar 11-15, 2024
Chapter 11 Areas & Perimeters

Chapter 11 : Area of polygons and circles intro.

Mostly section 11.3 in textbook

Notes - problem solve by breaking downs

- Kite and Rhombuses formulas using diagonals as triangle breakdown
- Look at composite shapes and view as breakdowns of above figures.
- Then discuss REGULAR polygon breakdowns

Lesson Objective(s): Students will find areas of rhombuses and kites. Students will find angle measures in regular polygons. Students will find areas of regular polygons.	CC State Standards	CC Mathematical Practice Focus
Previous Learning: Earlier in the book, students found the areas of triangles and special quadrilaterals.	HSG-GMD.A.3	MP1, MP2, MP3
New Vocabulary: center of a regular polygon, radius of a regular polygon, apothem of a regular polygon, central angle of a regular polygon		

Monday - Section 11.3 Regular Polygon Area

Warmup:

Every student make a right triangle with these dimensions 6 inches with an opposite acute angle of $360/16 = 22.5$ degrees - This will be a demonstration also of the congruence of triangles by AAS or ASA if third angle is found of 67.5 degrees.

Then do Student Journal pg. 328 : Answer together #3-6

Notes on finding the Area of Regular polygon terms - apothem, radius, side - use student journal pg. 326 for notes example and continue with pg. 328

- Steps:
- 1) From the center, breakdown a right triangle to the side
 - 2) find the central angle. = $360 / 2n$
 - 3) Find the apothem or side using TAN function
 - 4) Find the area of the right triangle and then multiply by the number of sides*2

Tuesday: Worksheet day on area of REGULAR Polygons

Work in groups on packet of area of polygons:

Memorize formulas or use breakdown by right triangle

SHOW your work

Wednesday: Section 11.1

- Watch Circumference of a circle video:
https://static.bigideasmath.com/protected/content/hs_tut/geo/c11/01/HSCC_Geom_11_01_ee1/HSCC_Geom_11_01_ee1.html and take notes on SJ pg.316
- Discuss the value of PI and tomorrow's celebration of it.
- Discuss arclength as a partial circumference
- Watch video #3 about application on distance using a wheel. SJ pg 315
- Watch video #4 on composite figure perimeter with side lengths.

- Complete student journal pg. 318 # 1-5 (exclude radian discussion)

Thursday PI DAY 3.14 Celebration

- The Pi Song: <https://www.youtube.com/watch?v=3HRkKznJoZAH>
- Website for MILLION digits of PI: <https://www.piday.org/million/>
- Take the quiz
- The reading of Sir Cumference and the Dragon of Pi
<https://www.youtube.com/watch?v=39aknOrsnbs>
- History video: <https://www.youtube.com/watch?v=1-JAx3nUwms>
- Bonus points:
 - Most recited values of PI (1st = 3 pts, 2nd = 2 pts, 3rd = 1 pt)
 - Bring in edible PI items (Pie = 3 pts, others at discretion of Mrs. Pletcher see list)

Friday: Section 11.2

- Watch AREA of a circle video:

https://static.bigideasmath.com/protected/content/hs_tut/geo/c11/02/HSCC_Geom_11_02_ee1/HSCC_Geom_11_02_ee1.html and take notes on SJ pg.322

- Discuss sector as a partial area
 - Watch video #3 about area of sector (partial area)
 - Watch video #5 on composite figure area with side lengths.
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- Complete student journal pg. 323 # 3-8 (exclude discussion)