

# Homework Assignments

Open-Ended Questions  
for

## Grade 6

Organized by TEKS

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**GRADE 6 TEKS-BASED HOMEWORK ASSIGNMENTS**  
**Table of Contents and TEKS/TAKS Correlation**

<b>TAKS OBJ</b>	<b>TEKS</b>	<b>Homework Assignment</b>	<b>DESCRIPTION OF HOMEWORK CONTENT</b>
1	6.1A	Homework #1 Homework #2 Homework #3 Homework #4	Compare and order whole numbers, fractions and decimals
1	6.1B	Homework #1 Homework #2 Homework #3	Generate equivalent forms of rational numbers including whole numbers, fractions and decimals
1	6.1C	Homework #1 Homework #2	Use integers to represent real-life situations
1	6.1D	Homework #1 Homework #2	Write prime factorization using exponents
1	6.1E	Homework #1 Homework #2	Identify factors of a positive integer, common factors, and the greatest common factor of a set of positive integers
1	6.1F	Homework #1 Homework #2	Identify multiples of a positive integer and common multiples and the least common multiple of a set of positive integers
1	6.2A	Homework #1 Homework #2 Homework #3	Model addition and subtraction involving fractions with objects, pictures, words, and numbers
1	6.2B	Homework #1 Homework #2	Use addition and subtraction to solve problems involving fractions and decimals
1	6.2C	Homework #1 Homework #2 Homework #3 Homework #4	Use multiplication and division of whole numbers to solve problems including situations involving equivalent rates  Use multiplication and division of whole numbers to solve problems including situations involving equivalent ratios
1	6.2D	Homework #1 Homework #2	Estimate and round to approximate reasonable results and to solve problems where exact answers are not required
1	6.2E	Homework #1 Homework #2 Homework #3	Use order of operations to simplify whole number expressions (without exponents) in problem situations
2	6.3A/ 6.3C	Homework #1 Homework #2 Homework #3	Use ratios to describe proportional situations Use ratios to make predictions in proportional situations
2	6.3B	Homework #1 Homework #2 Homework #3 Homework #4	Represent ratios with concrete models, fractions, and decimals  Represent percents with concrete models, fractions, and decimals
2	6.4A/ 6.4B  6.4A/ 6.4B	Homework #1 Homework #2 Homework #3  Homework #1 Homework #2 Homework #3	Use tables and symbols to represent and describe proportional and other relationships – perimeter and area Use tables of data to generate formulas representing relationships involving perimeter and area  Use tables and symbols to represent and describe proportional and other relationships – arithmetic sequences (with a constant rate of change) Use tables of data to generate formulas representing relationships involving (arithmetic sequences)

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2	6.4A/ 6.4B	Homework #1 Homework #2 Homework #3	Use tables and symbols to represent and describe proportional and other relationships – volume Use tables of data to generate formulas representing relationships involving volume of a rectangular prism
2 4	6.4A/ 6.8D	Homework #1 Homework #2 Homework #3 Homework #4	Use tables and symbols to represent and describe proportional and other relationships – conversions Convert measures within the same measurement system (customary and metric) based on relationships between units
2	6.5	Homework #1 Homework #2	Formulate equations from problem situations described by linear relationships
3	6.6A/ 6.6B	Homework #1 Homework #2 Homework #3	Use angle measurements to classify angles as acute, obtuse, or right Identify relationship involving angles in triangles
3	6.6B	Homework #1 Homework #2	Identify relationships involving angles in quadrilaterals
3	6.6C	Homework #1 Homework #2	Describe the relationship between radius, diameter, and circumference of a circle
3	6.7	Homework #1 Homework #2	Locate and name points on a coordinate plane using ordered pairs of non-negative rational numbers
4	6.8A/ 6.8B	Homework #1 Homework #2 Homework #3	Estimate measurements and evaluate reasonableness of results Select and use appropriate units, tools, or formulas to measure and to solve problems involving length (including perimeter) and area
	6.8A/ 6.8B	Homework #1 Homework #2 Homework #3 Homework #4	Estimate measurements and evaluate reasonableness of results Select and use appropriate units, tools, or formulas to measure and to solve problems involving volume
	6.8A/ 6.8B	Homework #1 Homework #2	Estimate measurements and evaluate reasonableness of results Select and use appropriate units, tools, or formulas to measure and to solve problems involving time, temperature, and weight
	6.8A/ 6.8B	Homework #1 Homework #2	Estimate measurements and evaluate reasonableness of results Select and use appropriate units, tools, or formulas to measure and to solve problems involving length (including perimeter) and area (circles)
4	6.8C	Homework #1 Homework #2	Measure angles
4 3	6.8C/ 6.6A	Homework #1 Homework #2	Measure angles (quadrilaterals) Use angle measurements to classify angles as acute, obtuse, or right
5	6.9A	Homework #1 Homework #2	Construct sample spaces using lists and tree diagrams
5	6.9B	Homework #1 Homework #2 Homework #3	Find the probabilities of a simple event and its complement and describe the relationships between the two
5	6.10A/ 6.10D	Homework #1 Homework #2 Homework #3	Select and use an appropriate representation for presenting and displaying different graphical representations of the same data Solve problems by collecting, organizing, and interpreting data (bar graph)

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<b>TAKS OBJ</b>	<b>TEKS</b>	<b>Homework Assignment</b>	<b>DESCRIPTION OF MINI-ASSESSMENT CONTENT</b>
	6.10A/ 6.10D	Homework #1 Homework #2 Homework #3	Select and use an appropriate representation for presenting and displaying different graphical representations of the same data Solve problems by collecting, organizing, and interpreting data (line graph)
	6.10A/ 6.10C/ 6.10D	Homework #1 Homework #2 Homework #9	Select and use an appropriate representation for presenting and displaying different graphical representations of the same data Sketch circle graphs to display data Solve problems by collecting, organizing, and interpreting data (circle graph)
	6.10A/ 6.10D	Homework #1 Homework #2 Homework #3	Select and use an appropriate representation for presenting and displaying different graphical representations of the same data Solve problems by collecting, organizing, and interpreting data (line plot)
	6.10A/ 6.10D	Homework #1 Homework #2 Homework #3	Select and use an appropriate representation for presenting and displaying different graphical representations of the same data Solve problems by collecting, organizing, and interpreting data (stem and leaf plot)
5	6.10B	Homework #1 Homework #2	Identify mean (using concrete objects and pictorial models), median, mode, and range of a set of data
6	6.11A	Homework #1 Homework #2	Identify and apply mathematics to everyday experiences, to activities in and outside school, with other disciplines, and with other mathematical topics
6	6.11B	Homework #1 Homework #2	Use a problem solving model that incorporates understanding the problem, making a plan, carrying out the plan, and evaluating the solution for reasonableness
6	6.11C	Homework #1 Homework #2	Select or develop an appropriate problem-solving strategy from a variety of different types
6	6.12A	Homework #1 Homework #2	Communicate mathematical ideas using language, efficient tools, appropriate units, and graphical, numerical, physical, or algebraic mathematical models
6	6.13A	Homework #1 Homework #2	Make conjectures from patterns or sets of examples and nonexamples
6	6.13B	Homework #1 Homework #2	Validate conclusions using mathematical properties and relationships

# GRADE 6 MATHEMATICS

**(6.6) Geometry and spatial reasoning.** The student uses geometric vocabulary to describe angles, polygons, and circles. The student is expected to: (C) describe the relationship between radius, diameter, and circumference of a circle.

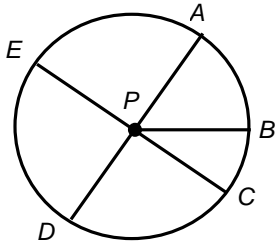
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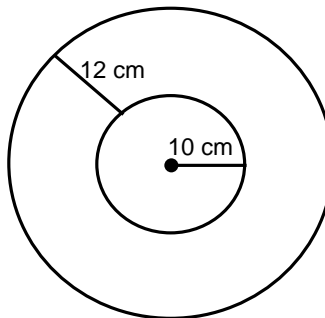
## 6.6C Homework #1

1. List the diameters and radii shown in circle  $P$ .



Diameters: _____, _____,
Radii: _____, _____, _____, _____, _____

2. The ratio of the diameter to the radius of a circle is \_\_\_\_\_ : \_\_\_\_\_.
- The ratio of the circumference to the diameter of a circle is approximately \_\_\_\_\_ : \_\_\_\_\_.
- The ratio of the circumference to a radius of a circle is approximately \_\_\_\_\_ : \_\_\_\_\_.
3. Betsy has a circular picture frame with a diameter of 8 inches. Describe a method Betsy can use to determine the circumference of her picture frame.
4. A storage shelf is 8 inches wide and 16 inches long. Mr. Jones wants to store 4-inch diameter paint cans on the shelf. Draw a sketch of a plan for storage of the cans. What is the maximum number of paint cans he store on the shelf if he does not stack them? Show your work.
5. Two circles share the same center point. What is the diameter of the larger circle? \_\_\_\_\_ Show your work and justify your answer.



# GRADE 6 MATHEMATICS

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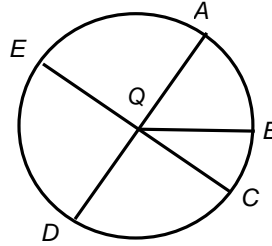
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## 6.6C Homework #2

1. Circle Q is shown below.



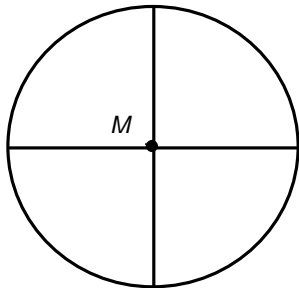
Write T before the true statements and F before the false statements below.

\_\_\_\_\_  $\overline{AQ}$  is twice as long as  $\overline{AD}$ .

\_\_\_\_\_ The circumference of circle Q is approximately 3 times as long as  $\overline{AD}$ .

\_\_\_\_\_ The ratio of  $QD$  to  $EC$  is 1:2.

2. James drew a circle with a radius of 5 inches and began writing a description of the circle. Complete the description.
- The circle has a diameter of \_\_\_\_\_ inches.
  - To find the circumference of the circle \_\_\_\_\_ 5 by \_\_\_\_\_ and then multiply the product by \_\_\_\_\_.
  - The ratio of any radius to any diameter in the circle is \_\_\_\_\_:\_\_\_\_\_.
3. A baker uses a cake pan with an 8-inch diameter. To find the circumference of his pan, he multiplied  $8 \times 2 \times \pi$ . Do you agree or disagree with the method the baker used to find the circumference of his cake pan? \_\_\_\_\_ Justify your answer.
4. Using your Grade 6 Mathematics Chart rulers measure the diameter and radius of circle M to the nearest centimeter. What is the ratio of the diameter to the radius?

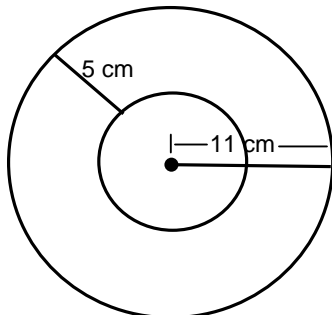


Diameter: \_\_\_\_\_

Radius: \_\_\_\_\_

Diameter: Radius = \_\_\_\_\_:\_\_\_\_\_

5. Two circles share the same center point. Describe a method that can be used to find the circumference of the smaller circle.



**Method for finding the circumference of the smaller circle:**