Name _____

Preparing for the Ohio Graduation Test in Mathematics

Strand Resources: Measurement

The following pages are for students. Use them to help you monitor your own test preparation. The resources are provided at CT4ME:
https://www.ct4me.net/Ohio_Graduation_Math_Test_Prep_MeasurementStrand.htm

Directions:

1. Identify the benchmark (A-F) below for review in Measurement. Below the benchmark, you will find Web resources for reviewing the concept and practice problems.
2. *Before beginning the Web exercises* for the benchmark you chose, fill in the "K" column: What do you already know about that benchmark? Then in the "W" column: Write what you still want to know.
3. When you have completed using a resource provided, place a check in the box in the first column. This will help you keep track of resources used. Decide if the resource was helpful. Write "yes" or "no" in the last column. Add your comments, if any, about the resource.
4. *After using all the resources* for each benchmark, go to the "L" column and write what you learned. Read your "K" column entries again to see if any of your prior knowledge was inaccurate, and rewrite those statements so that they are correct.
5. Look at the "W" column again, and place a check next to any of your questions that were not answered by using the resources. Be sure to mention those questions in class. Decide how you will find answers to those remaining questions.
6. *When you have completed all of the exercises provided with each benchmark and your K-W-L chart is complete*, reflect on your overall understanding of the benchmark. Be honest with yourself. In the last column circle your belief about your level of mastery: still no or very little understanding (N), some to a great deal of progress (P), I've got it!--mastery (M).

Name _____

<table>
<tr><td colspan="2">A. Solve increasingly complex non-routine measurement problems and check for reasonableness of results.</td><td>Circle Mastery Level:
N P M</td></tr>
<tr><td>What I Know</td><td>What I WANT to know</td><td>What I Learned</td></tr>
<tr><td></td><td></td><td></td></tr>
<tr><td>Check when completed</td><td>Resources</td><td>Was the Web resource helpful? (yes/no) Comment(s)</td></tr>
<tr><td></td><td>Approximations for Metric Conversion from National Institute of Standards and Technology, an agency of US Dept. of Commerce:
• Metric to U.S. Customary
• U.S. Customary to Metric</td><td></td></tr>
</table>

Name _____

	ScienceSpot.net: Metric Mania includes lessons and worksheets with answers.	
	 Play the YouTube videos from the Ohio Resource Center Tutorials for High School Mathematics: • Working with Metric Units and Prefixes for converting between metric units. • Metric and English Unit Conversions with Dimensional Analysis for converting between metric and English units and using dimensional analysis.	

Last Update: January 16, 2021

Name _____

<table>
<tr><td colspan="2">B. Use formulas to find surface area and volume for specified three-dimensional objects accurate to a specified level of precision.</td><td>Circle Mastery Level:
N P M</td></tr>
<tr><td colspan="2">What I Know</td><td>What I WANT to know</td><td>What I Learned</td></tr>
<tr><td colspan="2"></td><td></td><td></td></tr>
<tr><td>Check when completed</td><td colspan="2">Resources</td><td>Was the Web resource helpful? (yes/no) Comment(s)</td></tr>
<tr><td></td><td colspan="2">Math.Com, Prisms, Pyramids, Cylinders, Cones, Spheres: lesson and workout problems
• Volume formulas
• Surface area formulas</td><td></td></tr>
</table>

Name _____

	Play the VideoMathTutor.com video: Algebra: Formulas From Geometry. Formulas and concepts covered include angles (complementary & supplementary), triangles (perimeter and area), isosceles triangle, equilateral triangle, right triangle, Pythagorean Theorem, similar triangles perimeter and area formulas for quadrilaterals (square, rectangle, parallelogram, trapezoid). Some diagonal formulas, too, where applicable are included. Circles (radius, diameter, circumference, area), cube (diagonal of face, diagonal of cube, surface area and volume), rectangular box [or rectangular parallelepiped] (diagonal of box, surface area and volume), prisms (volume), pyramids (volume), cone (slant height, lateral surface area, total surface area, volume), cylinder (lateral surface area, total surface area, volume), and sphere (surface area and volume) are then reviewed.	

Name _____

C. Apply indirect measurement techniques, tools and formulas, as appropriate, to find perimeter, circumference and area of circles, triangles, quadrilaterals and composite shapes, and to find volume of prisms, cylinders, and pyramids.		Circle Mastery Level: N P M
What I **K**now	What I **W**ANT to know	What I **L**earned

Check when completed	Resources	Was the Web resource helpful? (yes/no) Comment(s)
	Math.Com: Polygon Basics, Triangles, Quadrilaterals, Area of Polygons and Circles lesson and workout problems	
	AlgebraLab.org: Fill in the blank practice problems, including word problems. Be sure to show the related AlgebraLab documents for lessons and additional practice problems on each topic. • Circumference and Areas of Circles	

Name _____

	• Areas and Perimeters of Triangles and Special Qualrilaterals (parallelograms, rectangles, and trapezoids). • Areas and Perimeters of Regular Polygons • Surface Area and Volume for prisms, cones, pyramids, cylinders, and spheres.	

Name _____

D. Use proportional reasoning and apply indirect measurement techniques, including right triangle trigonometry and properties of similar triangles, to solve problems involving measurements and rates.		Circle Mastery Level: N P M
What I **K**now	What I **W**ANT to know	What I **L**earned

Check when completed	Resources	Was the Web resource helpful? (yes/no) Comment(s)
	Purplemath: Ratio and Proportions involving Conversion Factors, Similar Figures, and Parts	

Name _____

<table>
<tr><td colspan="2">E. Estimate and compute various attributes, including length, angle measure, area, surface area and volume, to a specified level of precision.</td><td>Circle Mastery Level:
N P M</td></tr>
<tr><td colspan="2">What I Know</td><td>What I WANT to know</td><td>What I Learned</td></tr>
<tr><td colspan="2"></td><td></td><td></td></tr>
<tr><td>Check when completed</td><td colspan="2">Resources</td><td>Was the Web resource helpful? (yes/no) Comment(s)</td></tr>
<tr><td></td><td colspan="2">Mathguide.com:
• Area of Common Figures: rectangles, parallelograms, triangles, trapezoids, and circles. Lesson and quizmasters. Fill in and check answers.
• Volume and surface area for rectangular prisms, cylinders, square based pyramids, cones, spheres. Note to Ohio learners: for spheres and cones, only find volume. Quizmasters can be accessed from the main lesson page by scrolling</td><td></td></tr>
</table>

Name _____

	down to Geometry: Three dimensional solids. Fill in and check answers.	
	Math Open Reference: Use virtual manipulatives to explore: • Interior angles of regular and irregular polygons • Exterior angles of polygons	
	Geogebra: Polygons and Angles: A series of interactive applets created with GeoGebra for exploring interior and exterior angles of polygons.	

Name _____

F. Write and solve real-world, multi-step problems involving money, elapsed time and temperature, and verify reasonableness of solutions.		Circle Mastery Level: N P M
What I **K**now	What I **W**ANT to know	What I **L**earned

Check when completed	Resources	Was the Web resource helpful? (yes/no) Comment(s)

Name _____

Are you ready for the test?

1. Don't forget to review and complete the Six Steps for Success, including the full online practice tests. See: https://ct4me.net/Ohio_Graduation_Math_Test_Prep.htm
2. Complete an online OGT Practice Test. See: http://ogt.success-ode-state-oh-us.info/studentsOGT.htm

   How did you do?

   Score: _____ right out of _____ questions.

Look at the "W" column again for the benchmarks you chose to work on. List the questions you checked that you still have. For each of those, decide how you will find the answer.	
What I still **W**ANT to know—my unanswered questions	My Plan to Find the Answers

Name _____

Use this page for additional resources you use for test preparation. Write the benchmark.

Benchmark:		Circle Mastery Level: N P M
What I **K**now	What I **W**ANT to know	What I **L**earned

Check when completed	Resources	Was the resource helpful? (yes/no) Comment(s)

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