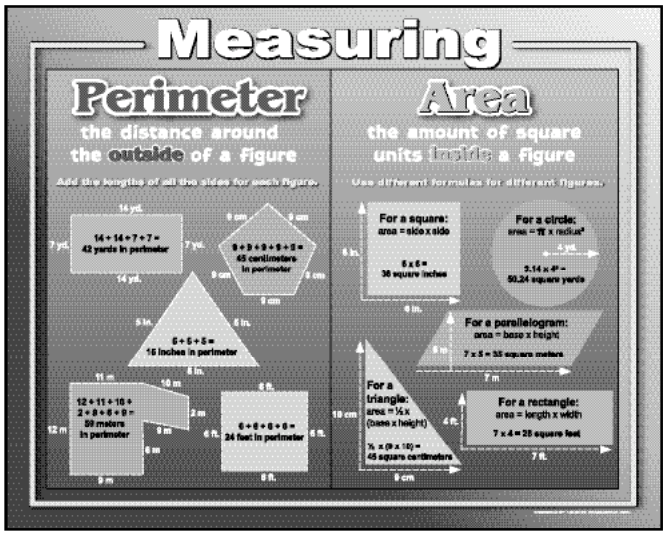
Really Good Stuff® **Activity Guide**

Measuring Perimeter and Area Poster

Congratulations on your purchase of the Really Good Stuff® **Measuring Perimeter and Area Poster**—a great tool for reminding your students how to find the areas and perimeters of many different shapes.

Included in this Really Good Stuff® set is:

- **Measuring Perimeter and Area Poster**, 19" x 24"
- This Really Good Stuff® Activity Guide



Introducing the Measuring Perimeter and Area Poster

This poster reinforces two mathematical skills that are often confused. You may wish to teach these concepts one at a time in separate lessons. If you choose to teach these skills separately, you may avoid confusion for students by covering the skill that you have not yet taught with chart paper or bulletin board paper. If you teach these skills together, you will likely want to display both sides of the poster at the beginning of the lesson. Either way, your students will be pleased to have this handy reference available to them as they practice these skills throughout the year.

Measuring Perimeter

Tell students that the perimeter of a figure is the distance around the outside of it. You may equate this concept to an imaginary bug walking around the outside edge of a figure. Draw a large square on your whiteboard or chalkboard. You might want to use a small object (piece of chalk, eraser, etc) to symbolize your imaginary bug. Place your "bug" at the outside edge of one corner on your square. Explain to students that the bug is going to walk around the outside edge of the square. Ask them how they can calculate how far the bug must walk in order to walk the entire edge of the square and return to the starting point. As students make suggestions, guide them to realize that they can measure each side of the board and add those measurements. The total of those measurements will be the perimeter of your square. Ask for volunteers to measure each side of the square and to write those measurements along each side. Then write an equation beside the square to show students how to add the sides to find the total.

Draw several more squares on the board and repeat the process, allowing students to measure the sides of some squares, and putting example measurements on others. Encourage students to find a pattern in these calculations (that they could multiple one side of a square by 4 to calculate the perimeter of a square).

When students are comfortable with finding the perimeter of a square, draw some rectangles on the board. Allow students to work through these examples and encourage them to realize that they need only measure two sides of a rectangle, since the top and bottom are equal to each other and the two sides are equal to each other as well. Continue to draw examples on the board, drawing polygons of all shapes and sizes. Allow students to create their own figures to measure, reminding them that each polygon must be a closed shape.

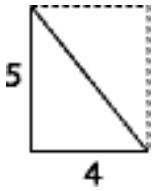
Measuring Perimeter and Area Poster

Provide students with rulers or tape measures and allow them to find the perimeters of objects in the classroom (desks, bulletin board, computer screen, globe, etc) for a memorable hands-on experience.

Measuring Area

Explain to students that the area of a figure is the number of square units inside the figure. On your whiteboard, chalkboard, or overhead projector, draw a large grid (similar to a large piece of graph paper). Draw a rectangle on the grid, in a different color if possible. Ask students how many square units are inside the rectangle. Most students will count the squares to determine the answer. Draw several more rectangles on the grid and repeat the exercise. Students will soon tire of counting squares and will be looking for shortcuts. Some students will realize that they can count the number of squares in one row, then multiply that number by the number of rows. When many of the students have caught on to this pattern, explain that an easy way to determine the area of a rectangle is to multiply the length times the width. Show students how to transfer this knowledge to finding the area of a square.

To demonstrate how to find the area of a triangle, draw a right triangle on the grid that has a height of 5 squares and a base of 4 squares. Ask students how many square units are inside the triangle. Students will quickly point out that some squares are not whole, making them more difficult to count. Show students that a triangle is part of a rectangle by adding lines to finish the rectangle. See example below:



Explain to students that they can find the area of the rectangle (20 square units) and divide it in half to determine the area of the triangle (10 square units). Tell them that, therefore, the formula for determining the area of a triangle is 1/2 x base x height (half of the area of the rectangle).

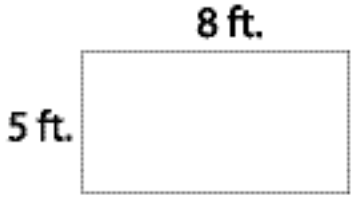
Note: For basic explanations, this example works best with right triangles. If isosceles triangles are used, you will need to extend the shape on both sides to create the rectangle.

To explain finding the area of a parallelogram, draw a parallelogram on the grid on your board. Explain to students that a parallelogram is very similar to a rectangle, and that you can make the parallelogram into a rectangle to prove it. Trace the right triangle that makes up the bottom corner of the parallelogram onto a piece of paper and cut out the triangle. Then shade in the piece of the parallelogram that was traced with your marker or chalk to show that you have removed it from that spot. Place the paper triangle on the other side of the parallelogram, completing the "rectangle". Students will soon realize that they can determine the area of this polygon by using the same formula as for a rectangle, area = length x width. See example below:

To reinforce the concept of finding the area of a parallelogram, provide students with graph paper and scissors. Allow them to draw parallelograms and cut them out. Then show them how to cut off the right triangle from the bottom of the parallelogram to move it to the other side. After practicing with a few parallelograms of different sizes, students will understand this concept better.

Find the perimeter of each figure below.

1. _____



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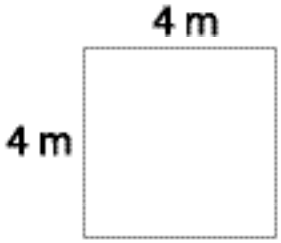
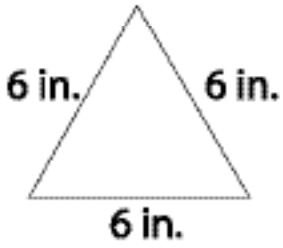
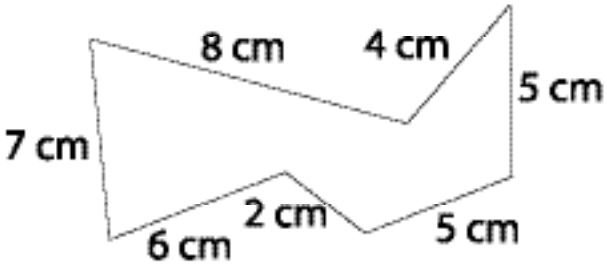


3. _____



4. _____



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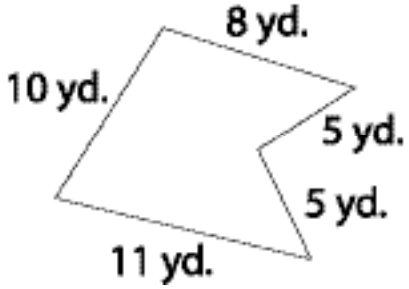
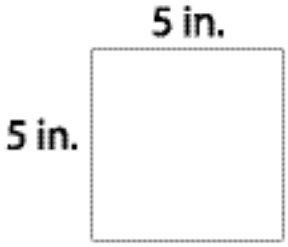


Find the area of the figures below.

1. _____



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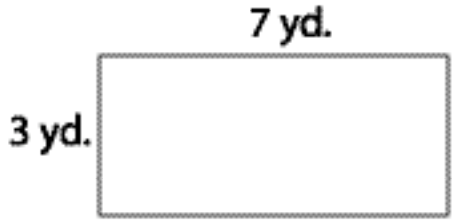

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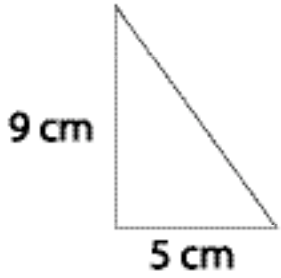

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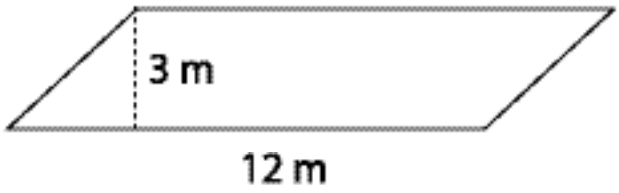

5. _____