Ozobot Area Challenge

Create a shape with a given area of square units to make a map for your Ozobot. Use Ozobot codes to identify the number of sides of each shape.

Directions: Pick a task card and follow the directions to create your shape map. You can use a Geoboard and rubber band to build the shape before drawing your map. Extra time? Try the enrichment task to create a new map.

Materials: Ozobot, markers, code reference chart, task card, dot array master page. Optional: geoboard, rubber bands

Common Core Standards: 2.G.A.2, 2.OA.C.4, 3.MD.C.5, 3.MD.C.6

Task Card #1

Create a shape with an area of 5 square units and draw it on your dot array page. You can use a Geoboard and rubber band to build the shape before drawing your map. Use a different Ozobot code to mark each side of your shape. How many sides does your shape have?

Enrichment Task: Create a new shape with an area of 5 square units, but with a different number of sides. Use a different Ozobot code to mark each side of your new shape. How many sides does your new shape have?

Task Card #2

Create a shape with an area of 6 square units and draw it on your dot array page. You can use a Geoboard and rubber band to build the shape before drawing your map. Use a different Ozobot code to mark each side of your shape. How many sides does your shape have?

Enrichment Task: Create a new shape with an area of 6 square units, but with a different number of sides. Use a different Ozobot code to mark each side of your new shape. How many sides does your new shape have?

Task Card #3

Create a shape with an area of 7 square units and draw it on your dot array page. You can use a Geoboard and rubber band to build the shape before drawing your map. Use a different Ozobot code to mark each side of your shape. How many sides does your shape have?

Enrichment Task: Create a new shape with an area of 7 square units, but with a different number of sides. Use a different Ozobot code to mark each side of your new shape. How many sides does your new shape have?

Task Card #4

Create a shape with an area of 8 square units and draw it on your dot array page. You can use a Geoboard and rubber band to build the shape before drawing your map. Use a different Ozobot code to mark each side of your shape. How many sides does your shape have?

Enrichment Task: Create a new shape with an area of 8 square units, but with a different number of sides. Use a different Ozobot code to mark each side of your new shape. How many sides does your new shape have?

Task Card #5

Create a shape with an area of 9 square units and draw it on your dot array page. You can use a Geoboard and rubber band to build the shape before drawing your map. Use a different Ozobot code to mark each side of your shape. How many sides does your shape have?

Enrichment Task: Create a new shape with an area of 9 square units, but with a different number of sides. Use a different Ozobot code to mark each side of your new shape. How many sides does your new shape have?

Task Card #6

Create a shape with an area of 10 square units and draw it on your dot array page. You can use a Geoboard and rubber band to build the shape before drawing your map. Use a different Ozobot code to mark each side of your shape. How many sides does your shape have?

Enrichment Task: Create a new shape with an area of 10 square units, but with a different number of sides. Use a different Ozobot code to mark each side of your new shape. How many sides does your new shape have?

Teacher Notes

This Ozobot activity provides learners with early experiences in area measurement using square units. Each student designs a shape with a given area on the dot array page. They can use a Geoboard and rubber bands to explore various shapes with the required area before drawing their shape. Students can make designs using halves of squares for their shape, too. This opens up more choices for design, as well as providing exploration in the addition of halves.

Students design their shape, then draw it with markers to make an Ozobot map. Each side of their shape needs to include one Ozobot code. Encourage students to counts the number of sides on their shape. After using their map with an Ozobot, students can design another shape with the same area, but a different number of sides. This will provide students with experiences in seeing that the same area can be found in shapes with a varying number of sides. For a further extension, you can ask students to count the number of units around the perimeter of their shape. Does the number of units in the perimeter relate to the number of square units in the area of their shape?

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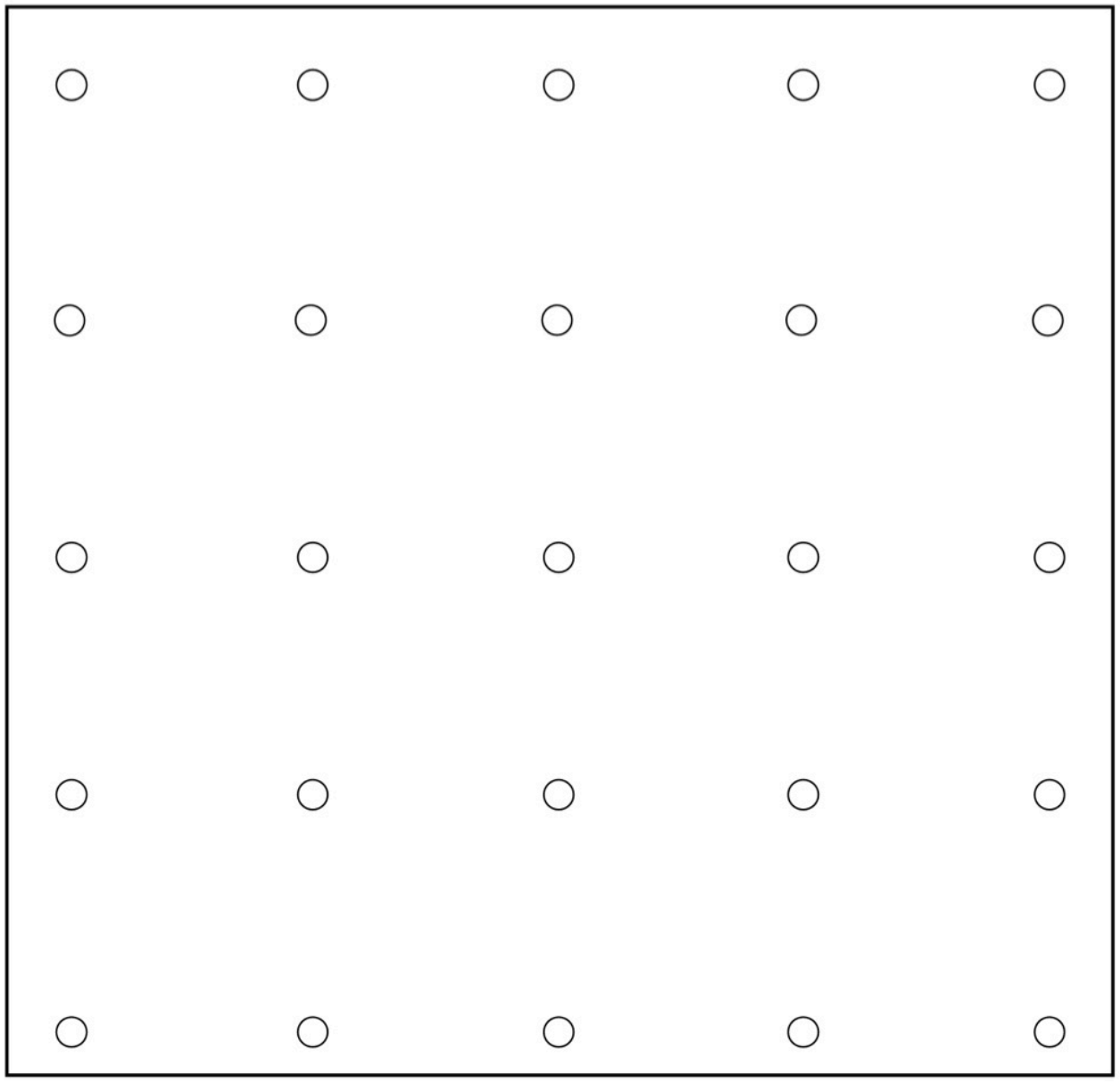

My shape has an area of _____ square units and _____ sides.