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CSI: MATHEMATICS
Curriculum Support Information

A mathematics resource for parents, teachers, and students

Georgia Department of Education
Kathy Cox, State Superintendent of Schools

Further investigations:

Look for graphs and charts in newspapers and magazines. Collect them and help your child organize them by type of graph.

Ask your child to categorize containers in your household by geometric shapes. Look for cans, boxes, cups, and cones. Discuss how they are alike and how they are different. Count the faces, edges and vertices.

Challenge your child to Identify parallel and perpendicular lines in your home (window frames, cabinet doors, bricks, etc.)

Terminology:

Plane figure: Two-dimensional figure made of points, all of which lie in the same plane. 4th grade plane figures are triangle, square, rectangle, trapezoid, quadrilateral, pentagon, hexagon, and irregular polygons

Polygon: A closed plane figure (no gaps or openings) made of three or more sides and angles

Trapezoid: A quadrilateral with one set of parallel sides

Quadrilateral: A four-sided polygon

Pentagon: A five-sided polygon

Hexagon: A six-sided polygon

Regular polygon: A polygon that is equiangular and equilateral

Irregular polygon: A polygon that has sides and angles of differing sizes

Perpendicular lines: Two lines that intersect to form four right angles

Parallel lines: Lines in a plane that stay exactly the same distance apart

Line graph: A graph that uses line segments to show how data change over a period of time

Book'em:

Round Trip by Ann Jonas

The Paper Crane by Molly Bang

Mummy Math: An Adventure in Geometry by Cindy Neuschwander

The King's Chessboard by David Birch

Related Files:

www.ceismc.gatech.edu/csi

Plane Coordinates, Geometric Figures, & Graphs

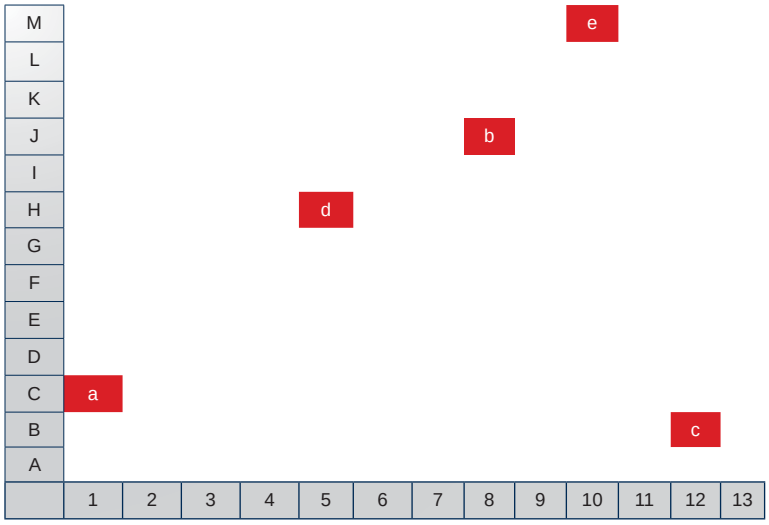
Fourth Grade 4 of 6

Students will:

- Identify and classify angles
- Distinguish between parallel and perpendicular lines and use them in geometric figures
- Identify differences among quadrilaterals
- Locate points in the coordinate plane
- Graph ordered pairs in the first quadrant
- Compare and contrast bar, line, and picture graphs
- Show evidence of finding missing data in graphs

Classroom Cases:

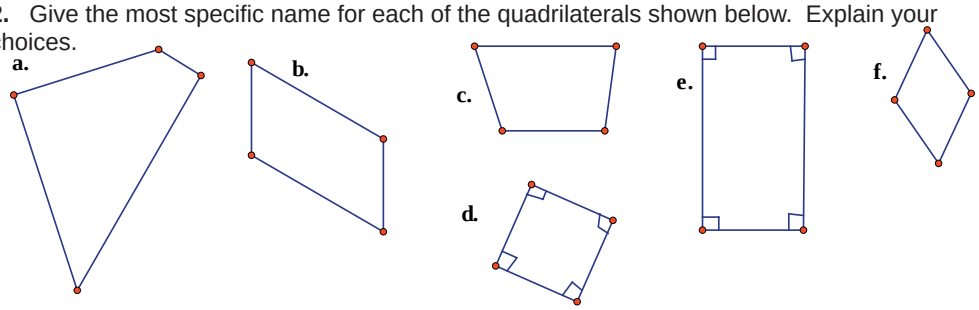
1. The diagram below represents seats in a football stadium. The rows are labeled A-M and the seats along the rows are numbered 1-13. Name the ordered pairs represented by locations a-e.



Case Closed - Evidence:

a. (1, C) b. (8, J) c. (12, B) d. (5, H) e. (10, M)

2. Give the most specific name for each of the quadrilaterals shown below. Explain your choices.



Case Closed - Evidence:

a. This is just a quadrilateral. All sides have different lengths.
b. Since there are two pairs of parallel sides, this is a parallelogram. It is not a rectangle since the angles are not 90°.
c. With only one pair of parallel sides, this figure is a trapezoid.
d. This is a square because all the angles are 90°, opposite sides are parallel, and all the sides are the same length.
e. This figure is a rectangle because all the angles are 90° and opposite sides are parallel, but it is not a square because the sides are different lengths.
f. Since all the sides are the same length but the angles are not 90°, this figure is a rhombus.

Clues:

Tally marks are used to help us keep track of counting by fives: 𝍸

When working with coordinate pairs, remember (horizontal, vertical).

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