Date 5/1/2011

COURSE: **MSC III**
MODULE 5: **Geometry**
UNIT 1: **Measurement**

es, Angles, and Circles

you work through the tutorial, complete the following.

What is your mission for this lesson? To explore lines & angles

A line is a set of points that extends forever in opposite directions.

A ray is a part of a line that has one endpoint and extends forever in one direction.

A segment is a part of a line or ray between two endpoints.

Complete these statements. Then draw an example for each term.

a. A line has no endpoint. Ex:

b. A ray has one endpoint. Ex:

c. A Segment always has a definite length.

An angle is the figure formed when two rays meet at a common endpoint. Ex. vertex, sides, sides

The vertex of an angle is the endpoint of the two rays that form the angle. The rays that form the angle are the sides of the angle.

A circle contains 360° degrees. The symbol ° represents degrees.

There are 90° degrees in one quarter of a circle.

If a circle is divided into 360 equal parts, each part represents $\frac{1}{360}$ of the circle and equals 1° degrees.

Key Words:
Line
Ray
Segment
Angle
Side of an angle
Vertex of an angle
Circle
Degree
Protractor
Right angle
Straight angle
Acute angle
Obtuse angle
Reflex angle

Learning Objectives:

- Explore lines, segments, rays, and angles.
- Classify angles.
- Use a protractor.

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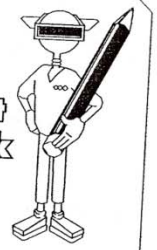


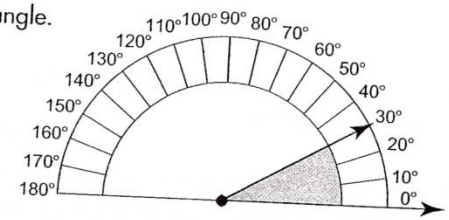
11. If we keep one ray of an angle fixed and rotate the other ray around the common endpoint, we can create any angle from 0° degrees to 360° degrees.

12. One half of a circle contains 180° degrees, which is the measure of the angle whose rays divide the circle in half.

13. Fill in the chart with the type of angle.

Angle Measure	Type
Between 0° and 90°	acute
Exactly 90°	right
Between 90° and 180°	obtuse
Exactly 180°	straight
Between 180° and 360°	reflex

14. The angle on the right is an acute angle.



a. The curved part of the measuring tool is divided into 18 equal parts.

b. Each mark between 0° and 180° represents 10° degrees.

c. The measuring tool is called a protractor. It is a device that measures angles.

d. How many degrees are in the angle? 30°

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Rectangles and Squares

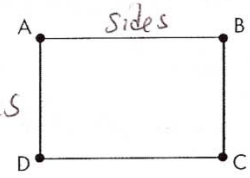
As you work through the tutorial, complete the following.

1. What is your mission for this lesson? explore rectangles

2. A rectangle is a 4-sided closed figure that has 4 right angles.

3. Each angle in a rectangle measures 90°. Each corner of a rectangle is the vertex of an angle.

4. Figure ABCD is a rectangle.



a. The letters, A, B, C, sides and D, represent each vertex.

b. The endpoints of a segment, such as A and B, can be used to refer to the sides of a rectangle. Segment AB can also be written as $\overline{AB}$.

5. To name an angle, use three letters.

a. The vertex is always named by the middle letter.

b. The other letters represent a point on each side of the angle.

c. The symbol for an angle is $\angle$.

d. In rectangle ABCD above, use 3 letters to name the angle with vertex A. $\angle DAB$ or $\angle BAD$

e. What is the measure of each angle? 90°

Key Words:
Rectangle
Square
Perpendicular ($\perp$)
Parallel ($\parallel$)
Plane
Perimeter
Area of a rectangle

Learning Objectives:
- Examine the properties of a rectangle and a square.
- Define perpendicular and parallel lines.
- Calculate the perimeters of rectangles and squares.
- Explore the relationship between the perimeters and areas of rectangles and squares.

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6. Four ways to name the rectangle in question 4 are ABCD, BCDA, CDAB, and DABC.

7. a. A square is a rectangle with four equal sides.

b. Every square is a rectangle, but not every rectangle is a square.

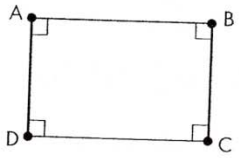
8. Lines that meet to form right angles are said to be perpendicular lines.

9. $\overline{AB}$ is perpendicular to $\overline{BC}$. We can write this as $\overline{AB} \perp \overline{BC}$.

10. A plane is a flat surface that goes on forever in all directions.

11. Lines in a plane that never meet are parallel. The symbol for this term is $\parallel$.

12. Figure ABCD is a rectangle. Use the symbols for parallel and perpendicular lines to complete each statement about the sides of this rectangle.



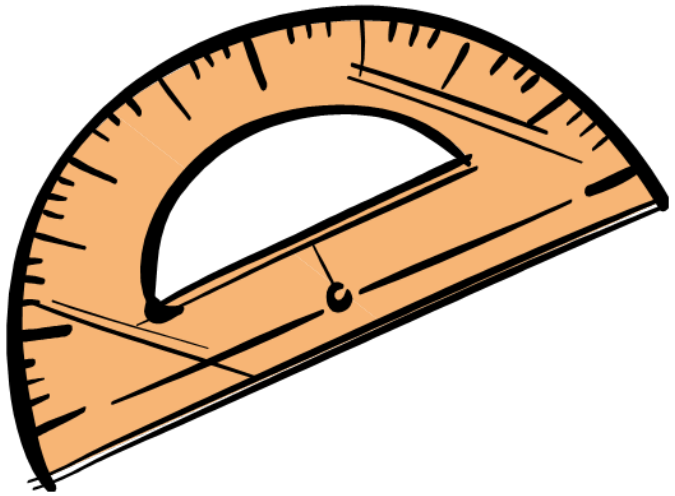
a. $\overline{AB} \perp \overline{BC}$ **b.** $\overline{BC} \parallel \overline{DA}$ **c.** $\overline{DA} \perp \overline{DC}$ **d.** $\overline{AB} \parallel \overline{DC}$

13. Perimeter is the sum of the lengths of the sides of a figure.

14. Area is the number of square units in a figure.
The area of a rectangle is equal to its length times it width, or $A = l \times w$.

http://www.ossmann.com/protractor/conventional-protractor.pdf

Please print a protractor from the link if you don't have one at home.



Homework (due May8)

- Math III & IV

Pages 163-164, pages 167-168, all

SEE YOU NEXT WEEK!