



Dear Third Grade Families,

In Unit 10, students will work on the following third grade Common Core standards in the Measurement and Data (MD) domain.

3.MD.5	Recognize area as an attribute of plane figures and understand concepts of area measurement. a. A square with side length 1 unit, called “a unit square,” is said to have “one square unit” of area, and can be used to measure area. b. A plane figure which can be covered without gaps or overlaps by n unit squares is said to have an area of n square units.
3.MD.6	Measure areas by counting unit squares (square cm, square m, square in, square ft, and improvised units)
3.MD.7	Relate area to the operations of multiplication and addition. a. Find the area of a rectangle with whole-number side lengths by tiling it, and show that the area is the same as would be found by multiplying the side lengths. b. Multiply side lengths to find areas of rectangles with whole-number side lengths in the context of solving real-world and mathematical problems, and represent whole-number products as rectangular areas in mathematical reasoning. c. Use tiling to show in a concrete case that the area of a rectangle with whole-number side lengths a and $b + c$ is the sum of $a \times b$ and $a \times c$. Use area models to represent the distributive property in mathematical reasoning. d. Recognize area as additive. Find areas of rectilinear figures by decomposing them into non-overlapping rectangles and adding the areas of the non-overlapping parts, applying this technique to solve real-world problems
3.MD.8	Solve real-world and mathematical problems involving perimeters of polygons, including finding the perimeter given the side lengths, finding an unknown side length, and exhibiting rectangles with the same perimeter and different areas or with the same area and different perimeters.

Unit 10 Concepts:

- Area
- Distributive Property
- Perimeter

Unit 10 Vocabulary:

- Square centimeters (cm^2)
- Square meters (m^2)
- Square inches (in^2)
- Square feet (ft^2)

Need a review? Check out our lesson videos on-line!

swunmath.com/student-videos

If you don't know the class's special name, ask your child's teacher.

Ask questions like these to help your child become a productive mathematical thinker:

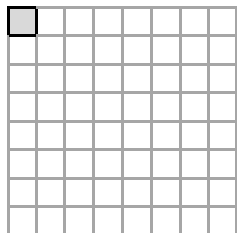
- When you tile a rectangle with same-size square units, how is that like building an array?
- What's the difference between area and perimeter?
- Use square napkins to find the area and perimeter of a rectangular tabletop.
- How do you find the area of a shape that is composed of two (or more) rectangles with sides touching?

We encourage you to talk with your child daily about what was learned in math class.

Thank you for your support!

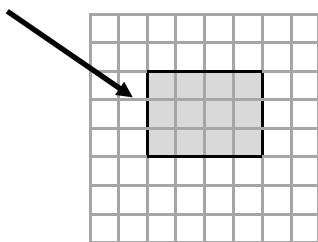


Square unit: a square whose sides all measure 1 unit



Area: the measurement of the surface of a closed plane shape (square units)

This rectangle has an area of 12 square units.



Metric

Square centimeter (cm²):

- a square that is 1 centimeter on all sides
- used to measure small areas

Square meter (m²):

- a square that is 1 meter on all sides (100 centimeters)
- used to measure rooms, houses, etc.

Standard Units of Measure

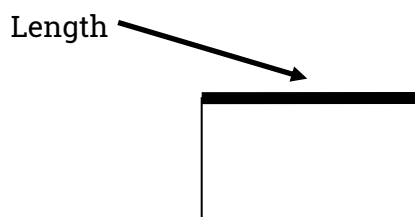
Square inch (in²):

- a square that is 1 inch on all sides
- used to measure small areas

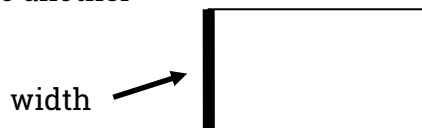
Square foot (ft²):

- a square that is 1 foot on all sides (12 inches)
- used to measure rooms, houses, etc.

Length: distance from one end to another



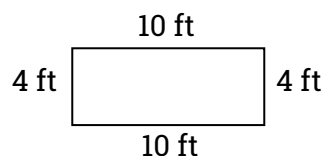
Width: the distance from one side of something to another



Area: the measurement of the surface of a closed plane shape (square units)



Perimeter: the distance around a polygon

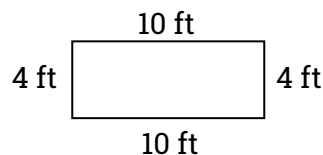


$$\text{Perimeter} = 10 \text{ ft} + 4 \text{ ft} + 10 \text{ ft} + 4 \text{ ft}$$

The perimeter is 28 ft.

Area: the measurement of the surface of a closed plane shape (square units)

$$\text{length} \times \text{width}$$



$$\text{Area} = 10 \text{ ft} \times 4 \text{ ft}$$

The area is 40 ft².