Student _____ Class _____ Date _____

Lesson 22: Scale Drawings

NYS Learning Standards:

7.G.1 Solve problems involving scale drawings of geometric figures, including computing actual lengths and areas from a scale drawing and reproducing a scale drawing at a different scale.

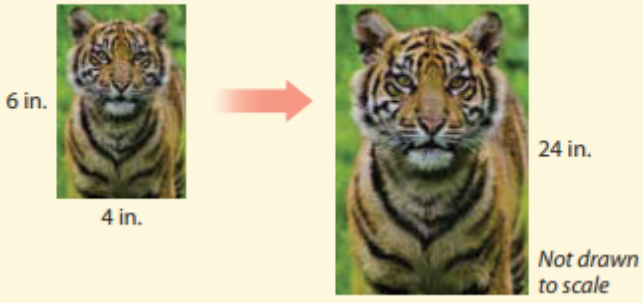
Learning Outcome:

- Understand that a scale is a ratio.
- Compute actual lengths from a scale drawing involving geometric figures.
- Compute actual areas from a scale drawing involving geometric figures.
- Reproduce a scale drawing using a different scale.
- Determine the scale of a drawing given the ratios of lengths and areas in the drawing and the actual dimensions.

Vocabulary:

- Scale Drawing: **a drawing that shows an object with its measurements in proportion to the actual measurements of the object.**
- Scale: **a ratio that compares the measurements used in a scale drawing with the actual measurements.**
- Scale Factor: **a constant of proportionality.**

Suppose you want to enlarge a 4-inch by 6-inch photograph as much as possible so that it fits on a bulletin board that is 24 inches high. What is the widest the photograph can be?



Below is a scale drawing of a soccer field. A length of 1 centimeter in the drawing corresponds to 15 yards in the actual field. Find the dimensions and the area of the actual field.