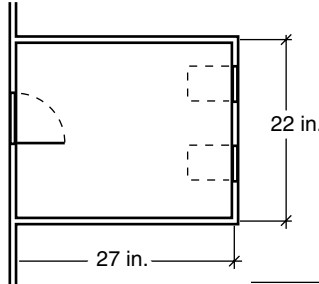Name _____ Date _____ Class _____
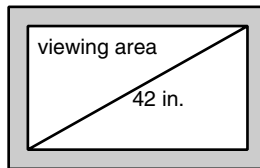
Problem Solving
Ratio and Proportion

1. For a certain type of tropical fish, it is recommended that you have no more than 2 fish per 10 gallons of water. How many fish could you have in a fish tank that holds 35 gallons of water?

_____

2. A library is being expanded, and the new wing's length is to be 50 feet greater than its width. A diagram of the new wing is shown. What are the actual dimensions of the new wing?

22 in.

27 in.

_____

3. The *Titanic* was 882 feet 9 inches long. You can build a model of the ship that is 2 feet 6 inches long and 6 inches high. What was the approximate height of the *Titanic* to the nearest inch?

_____

4. The *aspect ratio,* or ratio of length to width of the viewing area, of a wide-screen 42-inch television is 16 : 9. What are the dimensions of the rectangular viewing area to the nearest tenth?

viewing area

42 in.

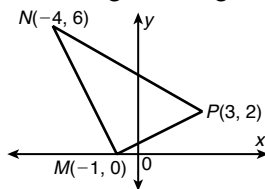_____

Choose the best answer.

5. In a museum gift shop, a miniature *Acrocanthosaurus* is 22.8 centimeters long and 15.9 centimeters tall. The package says that the actual dinosaur was approximately 9 meters long. About how tall was the dinosaur?

A 6.3 m   **C** 12.9 m

B 7.7 m   **D** 40.3 m

7. Write a ratio expressing the slope of the hypotenuse in right triangle *MNP*.

$N(-4, 6)$ y

$P(3, 2)$

$M(-1, 0)$ 0 x

A $-\dfrac{7}{4}$ **C** $-\dfrac{1}{2}$

B $-\dfrac{4}{7}$ **D** $\dfrac{1}{4}$

6. A model airplane has a wingspan of about 15 inches. The actual airplane has a wingspan of 30 feet and a length of 42 feet. How long is the model?

F 11 in.   **H** 21 in.

G 14 in.   **J** 30 in.

8. The ratio of the interior angle measures of a pentagon is 2 : 2 : 3 : 4 : 6. What is the measure of the smallest angle to the nearest degree?

F 32°   **H** 95°

G 64°   **J** 191°

Holt Geometry