Shape and Space 3

Name: _____

Use the following diagram to answer numerical-response question 3.

Sam draws two polygons that are similar. The first polygon has a perimeter of 16 cm and the second polygon has a perimeter of 10 cm.

ratio of increase

$\frac{16}{10} = 1.6$

Numerical Response

3. If the shortest side of the first polygon has a length of 4 cm, then the corresponding side of the second polygon has a length of 6.4 cm.

(Record your answer in the numerical-response section on the answer sheet.)

$4\text{cm} \cdot 1.6 = 6.4$

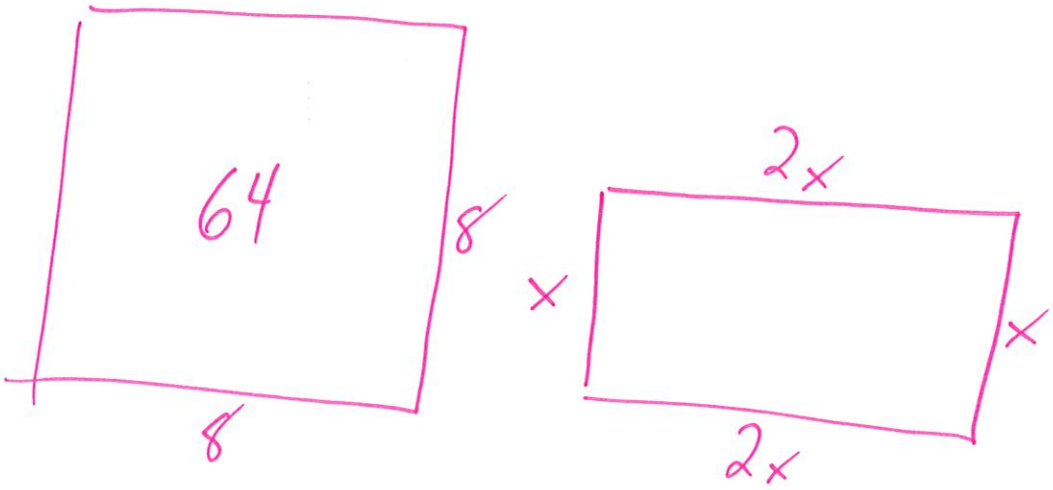
Use the following information to answer numerical-response question 4.

When a square piece of paper is folded in half, the resulting figure has a perimeter of 24 cm.

Numerical Response

4. The **area** of the square piece of paper before it is folded is 64 cm^2.

(Record your answer in the numerical-response section on the answer sheet.)



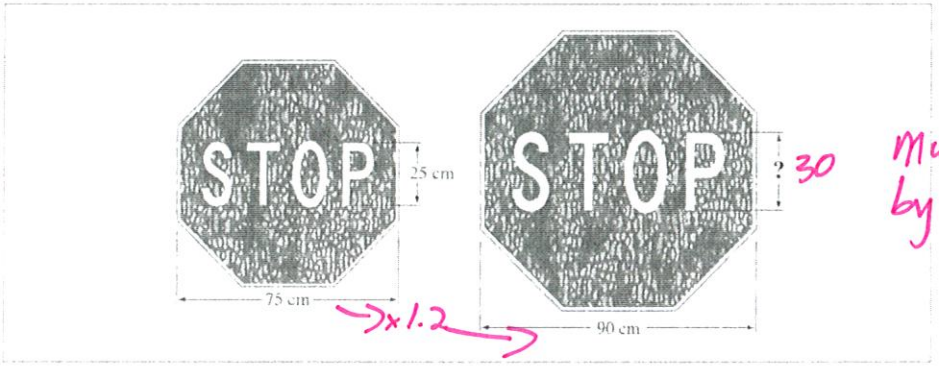
$2x + 2x + x + x = 24$

$6x = 24$

$x = 4$

Shape and Space 3

Name:_____



90×
75

30

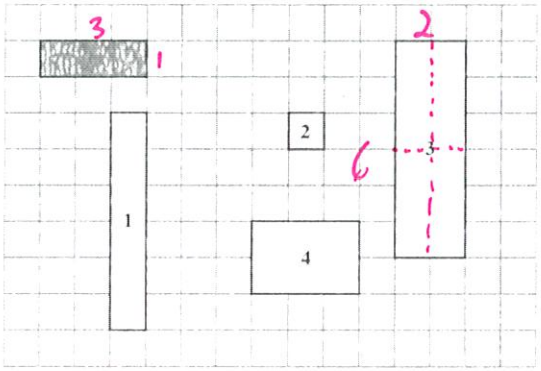
Must multiply by the same ratio

40. If the two stop signs shown above are similar, what is the height of the letters in the larger stop sign?

A. 30 cm
B. 40 cm
C. 45 cm
D. 50 cm

Use the following information to answer question 6.

Four-sided Polygons



6. Which of the polygons above is proportional to the shaded rectangle?

A. 1
B. 2
C. 3
D. 4