Name: $\qquad$

## SHOW ALL SOLVING WORK ON YOUR PAPER.

1. Find missing measures:
$m \angle 1, m \angle 2, m \angle 3$


Find the indicated angle or variable for each problem.
2. Find length of $S Q$.

3. Find x .

2. $S Q=$ $\qquad$
3. $x=$ $\qquad$
4. Find the missing angle.

5. Find $x$.

$m \angle 1=$ $\qquad$

$$
m \angle 2=
$$

$\qquad$
$m \angle 3=$ $\qquad$
5. $X=$ $\qquad$
4. ?= $\qquad$

For each pair of triangles, state the postulate or theorem that can be used to conclude that the triangles are congruent (SSS, SAS, ASA, AAS, HL). If there is not enough information to conclude the triangles are congruent, then write "not enough information". If the two triangles are congruent, write the congruence statement.
6.

7.

6. $\qquad$
$\triangle A B C \cong$ $\qquad$
7. $\qquad$
$\Delta \mathrm{FGH} \cong$ $\qquad$
8.

9.

10. $\qquad$
$\qquad$
$\qquad$ Perimeter of the triangle is 92 cm . What are the side lengths?
11. Solve each proportion for the variable indicated.
A. $\frac{5}{15}=\frac{x}{60}$
B. $\frac{3}{6}=\frac{r-3}{12}$
12.The Polygons are similar. Find the missing side length.

12. ? = $\qquad$

