## Unit 4 Triangle Congruence Study Guide

## Basics of Triangles

1. Solve for the missing angle measure.

2. Solve for $x$.

3. What is the measure of angle E ?

4. Solve for the missing angle measure.

5. Solve for $x$.

6. Find the measure of the missing angle.


## TRIANGLE CONGRUENCE

7. Name the three correspondong angles:

$$
\Delta \mathrm{WAT} \cong \Delta \mathrm{TRF}
$$

8. Name the three corresponding sides:

$$
\Delta \mathrm{ANG} \cong \Delta \mathrm{CSW}
$$

9. Name the following angles or sides that are congruent to the stated angle or side.
a. $\angle A$
b. $\angle B C A$
c. $\overline{A C}$
d. $\angle \mathrm{F}$

e. $\angle \mathrm{GEF}$
10. If so, determine how the following triangles are congruent:

11. Suppose $\triangle A B C \cong \triangle M N P$ and $\angle A \cong \angle M$ and $\angle C \cong \angle P$. What additional information would be needed to prove the triangles are congruent by ASA and AAS?

ASA: $\qquad$

AAS: $\qquad$
12. For the following information, determine if the triangles are congruent. If they are, state which theorem proves them congruent and then write a congruence statement.
a. $\overline{\mathrm{GH}} \cong \overline{R S}, \overline{\mathrm{Gl}} \cong \overline{R T}$, and $\overline{\mathrm{HI}} \cong \overline{S T}$
b. $\overline{M P} \cong \overline{C E}, \overline{N P} \cong \overline{D E}$, and $\angle P \cong \angle E$

## TRIANGLE PROOFS

13. Write a two column proof for the following:

Given: $M$ is the midpoint of $P N$ and $K Q$
Prove: $P K \cong N Q$

| Statement | Reason |
| :--- | :--- |
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14. Write a two column proof for the following:

Given: $R T \cong T S, T Q \perp R S$
Prove: $R Q \cong Q S$


| Statement | Reason |
| :--- | :--- |
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