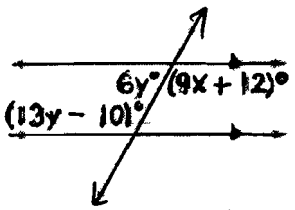
Geometry CST Mixed Review A
SHOW WORK. NO CALCULATORS.

Name_____

1. Provide a counterexample to prove this statement false:
If a 4-sided figure has 4 right angles, then it has 4 congruent sides.

2. Accept the two statements as given. State a conclusion based on deductive reasoning.
$\angle A \cong \angle B$
$m\angle A = 72$

3. Find the values of x and y.



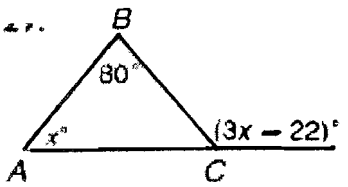
4. A regular polygon has 18 sides.
a) Find the sum of the interior angles.

b) Find the measure of 1 interior angle.

5. 53 If the measure of an exterior angle of a regular polygon is 120°, how many sides does the polygon have?

A 3
B 4
C 5
D 6

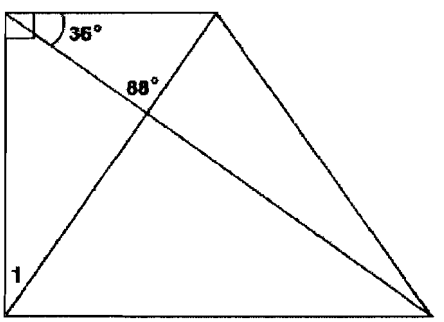
6. find $m\angle A$.



7. 55 The measures of the interior angles of a pentagon are $2x$, $6x$, $4x - 6$, $2x - 16$, and $6x + 2$. What is the measure, in degrees, of the largest angle?

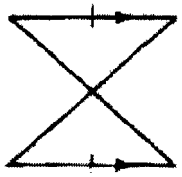
A 28
B 106
C 170
D 174

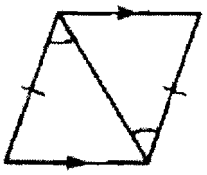
8. 57 What is $m\angle 1$?

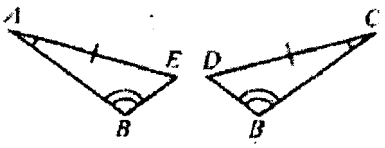


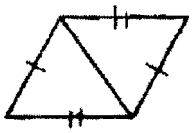
A 34°
B 56°
C 64°
D 92°

9. State which method(s) can be used to prove the triangles congruent:

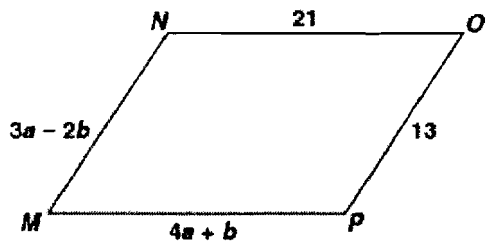
a. 

b. 

c. 

d. 

10. 27 **What values of a and b make quadrilateral $MNOP$ a parallelogram?**



A $a=1, b=5$

B $a=5, b=1$

C $a=\frac{11}{7}, b=\frac{34}{7}$

D $a=\frac{34}{7}, b=\frac{11}{7}$

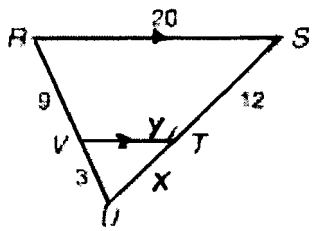
11. An indirect proof is to be used to prove the following:
If $AB = AC$, then ΔABD is congruent to ΔACD.
Complete the first sentence of the proof:

"Assume temporarily that _____

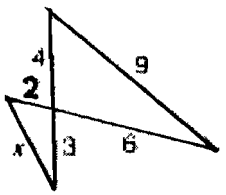
_____.

12. Two sides of a triangle measure 24 cm and 7 cm. Between what two numbers must the third side lie?

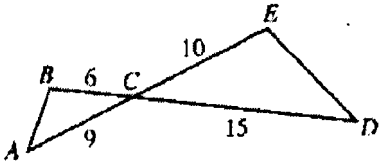
13. Find x and y.

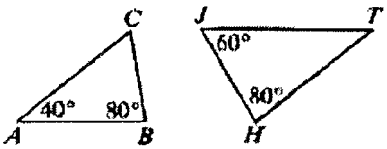


14. Find x.



15. Name 2 similar triangles. Give the reason why they are similar.

a. 

b. 

c.