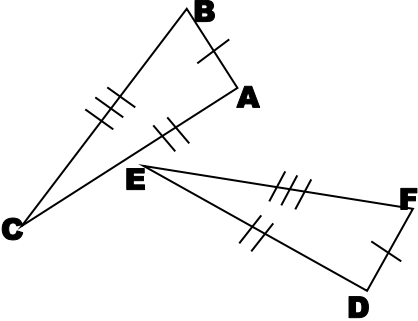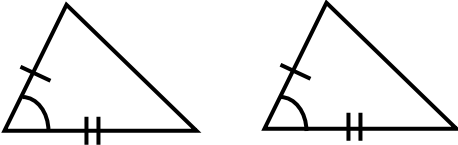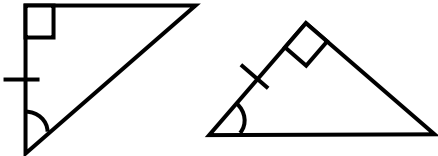NAME_____DATE_____PER_____

THIRD SIX WEEKS REVIEW

CORRESPONDING PARTS OF CONGRUENT TRIANGLES
Given each set of congruent triangles, complete each of the following.
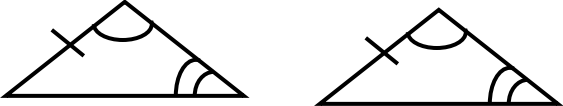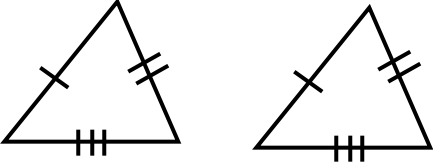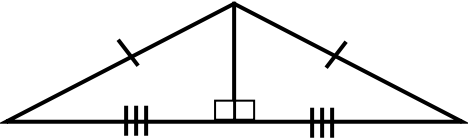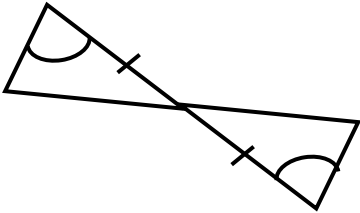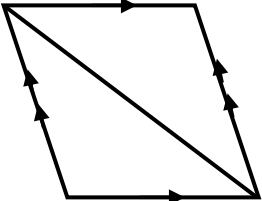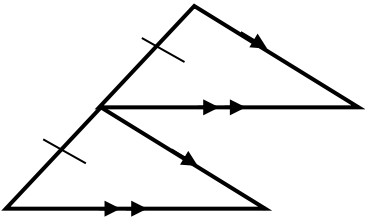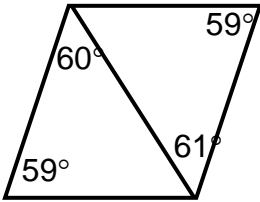
1. $\angle S \cong$ _____ $\overline{FO} \cong$ _____

   $\angle P \cong$ _____ $\overline{EO} \cong$ _____

   $\angle R \cong$ _____ $\overline{EF} \cong$ _____

   $\triangle SRP \cong \triangle$_____

$\triangle RSP \cong \triangle FOE$

2. $\angle A \cong$ _____ $\overline{AB} \cong$ _____

   $\angle B \cong$ _____ $\overline{BC} \cong$ _____

   $\angle C \cong$ _____ $\overline{AC} \cong$ _____

   $\triangle ABC \cong \triangle$_____

CONGRUENT TRIANGLES BY SSS, SAS, ASA, AAS, and HL
Determine whether the following triangles are congruent by SSS, SAS, ASA, AAS, or HL
or if they are not congruent.

3. _____

4. _____

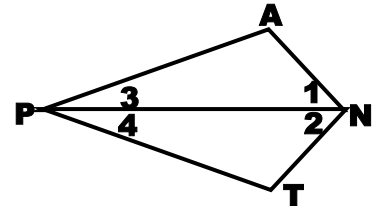|	
5. _____	
6. _____	
7. _____	
8. _____	
9. _____	
10. _____	
11. _____	

PROOFS
Write a two-column proof for each of the following.

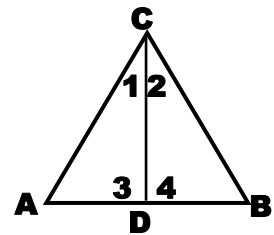12. GIVEN: $\overline{AN} \cong \overline{TN}$; $\angle 1 \cong \angle 2$

    PROVE: $\triangle NAP \cong \triangle NTP$

STATEMENTS	REASONS
	Given
$\angle 1 \cong \angle 2$	
	Reflexive Property
$\triangle NAP \cong \triangle NTP$	

13. GIVEN: $\overline{DC}$ bisects $\angle ACB$; $\angle 3 \cong \angle 4$

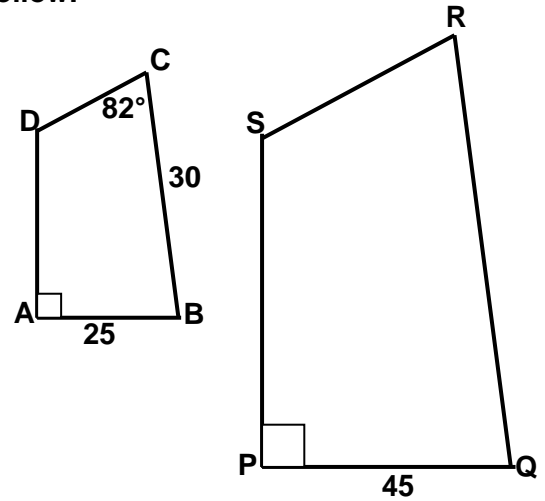 PROVE: $\angle A \cong \angle B$

STATEMENTS	REASONS
$\overline{DC}$ bisects $\angle ACB$	
	Given
$\angle 1 \cong \angle 2$	
	Reflexive Property
$\triangle ACD \cong \triangle$_____	
$\angle A \cong \angle B$	

ABCD is similar to PQRS below. Answer the questions that follow.
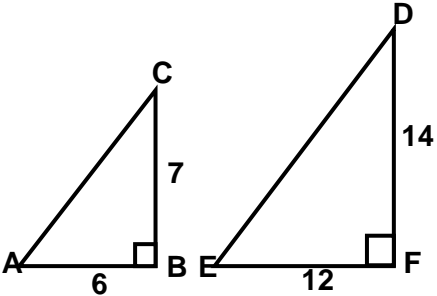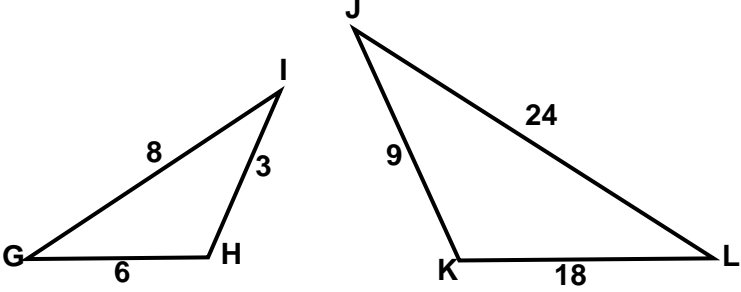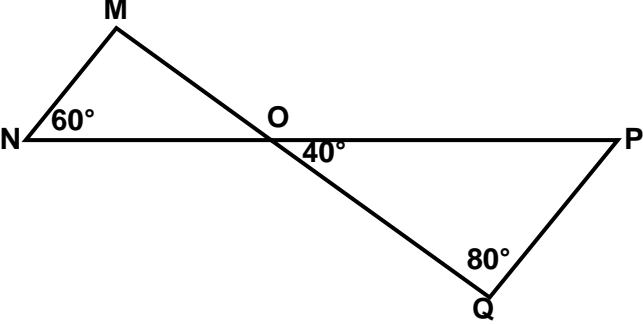
14. _____	What is the common ratio of PQRS to ABCD?
15. _____	Find m∠R.
16. _____	Find QR.

Two similar polygons are shown. Find the values of 'x' and 'y'.

17. x = _____ y = _____	
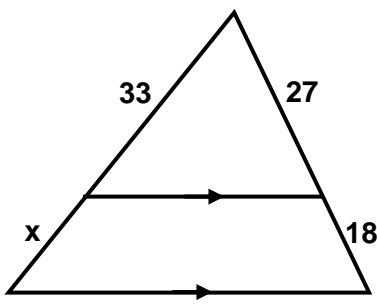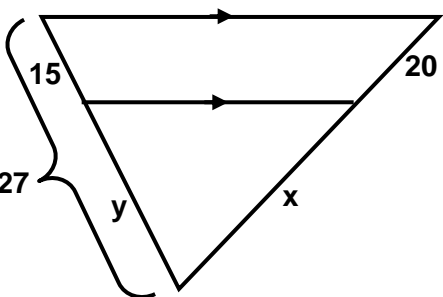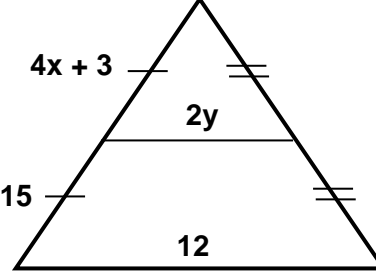
Determine if each pair of triangles is similar. If yes, tell how and write a similarity statement.

18. YES or NO How?_____ Δ_____ ~Δ_____	
19. YES or NO How?_____ Δ_____ ~Δ_____	
20. YES or NO How?_____ Δ_____ ~Δ_____	

Find the correct answer to each problem, then write the answer in the blank provided.

| _____21. | The ratio of the measures of two complementary angles is 5:4. What is the measure of the smaller angle? |

Find the value(s) of 'x' and 'y' where applicable) in each of the following.

22. x = _____

33   27

x   18

23. x = _____

y = _____

15   20

27

y   x

24. x = _____

y = _____

4x + 3

2y

2x + 15

12

Ratios & Proportions
Solve each proportion.

25. b = _____	$\dfrac{b}{63} = \dfrac{3}{7}$

26. a = _____	$\dfrac{a-3}{8} = \dfrac{3}{4}$

27. _____	The ratio of teachers to students at A & M Consolidated High School is 1 to 14. If there are 2800 students, how many teachers are there?
28. _____	A tree that fell during a storm landed on the top of a wall so that it leans against the wall. Jeff who is 5 feet tall stands under the tree so that his head just touches the wood. He is 5 feet from the wall and 10 feet from the base of the tree. Find the height of the wall.
29. _____	Jonathan is 3 ft. from a lamppost that is 12 ft. high. The lamppost and its shadow form the legs of a right triangle. Jonathan is 6 ft. tall and is standing parallel to the lamppost. How long is Jonathan's shadow?

30. _____	A 40 cm tomato plant casts a 25 cm shadow. How tall is the corn stalk if its shadow is 280 cm long?

TRIGONOMETRIC RATIOS
Use the diagram to express each ratio as a fraction in simplest form.

31. _____	Find sinL.
32. _____	Find cosL.
33. _____	Find tanL.
34. _____	Find sinN.
35. _____	Find cosN.
36. _____	Find tanN.

L

15

9

M 12 N
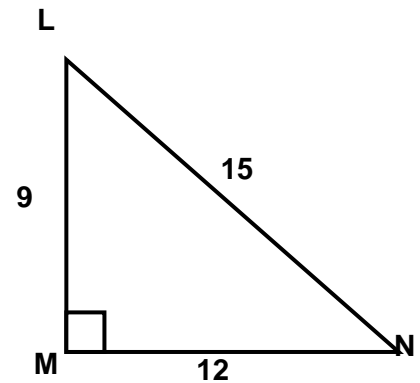
Use your calculator to find the following. Be sure the calculator is in degree mode. Round answers to the nearest thousandth.
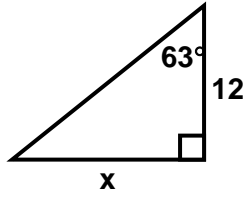
37. **sin 27˚ =** _____   38. **cos 42.5˚ =** _____   39. **tan 30˚ =** _____

Using your calculator (be sure the calculator is in degree mode), find the value of 'x' in each of the following. Round solutions to the nearest hundredth.

40. x = _____	63° 12 x
41. x = _____	100 61° x