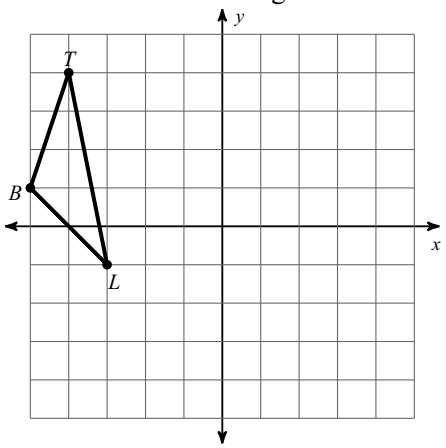
Geometry CC (A) Name_____

Final Exam Review

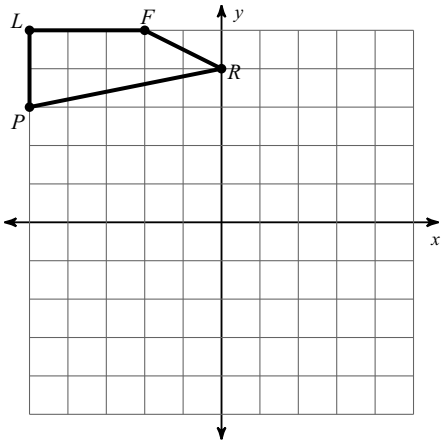
Date_____

Find the coordinates of the vertices of each figure after the given transformation.

1) translation: 7 units right and 3 units down



2) reflection across the x-axis

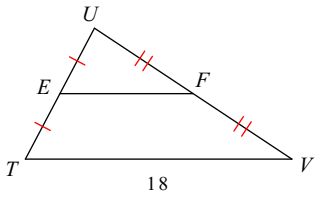


3) B is between A and C. Find AC given that AB=25 and BC=18.

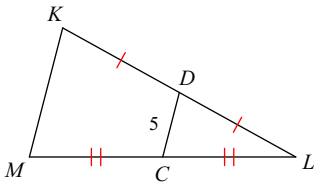
4) $\overrightarrow{BC}$ bisects $\angle ABD$. If the measure of $\angle ABC = 28°$, find the measure of $\angle ABD$.

Find the missing length indicated.

5) Find EF

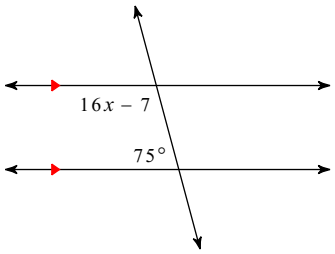


6) Find KM

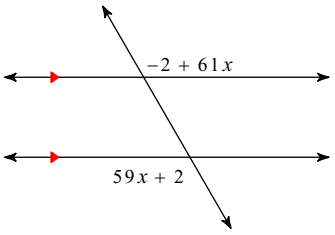


Solve for x.

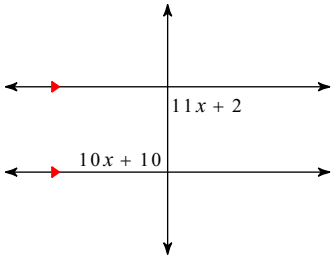
7)



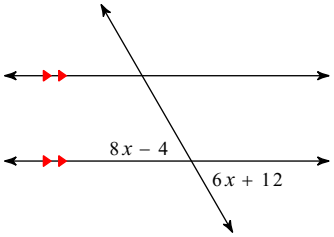
8)



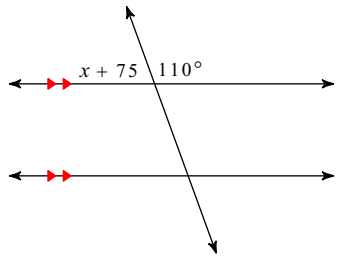
9)



10)



11)



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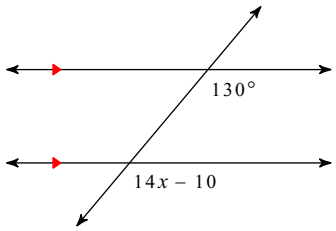
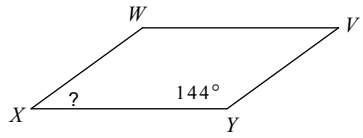
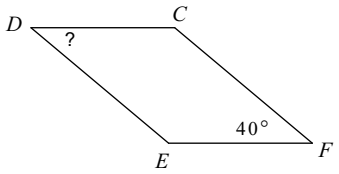


Find the measurement indicated in each parallelogram.

13)

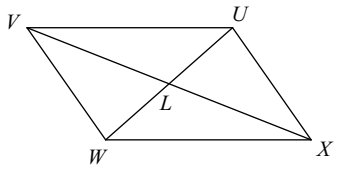


14)

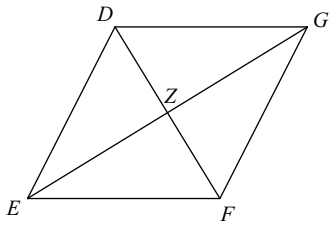


Solve for *x*. Each figure is a parallelogram.

15) $WU = 22$
$LU = x + 6$

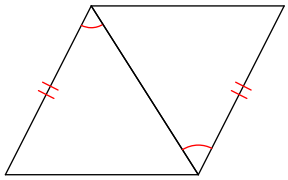


16) $FZ = 6$
$ZD = 7x - 1$

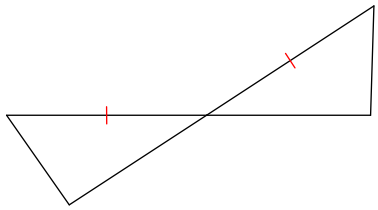


State if the two triangles are congruent. If they are, state how you know.

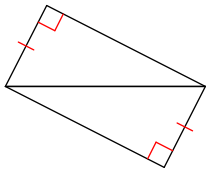
17)



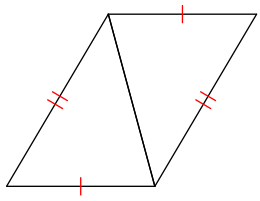
18)



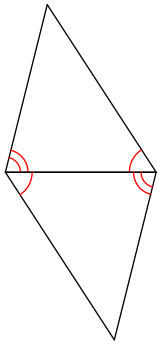
19)



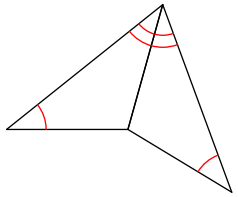
20)



21)

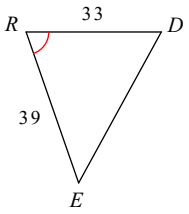


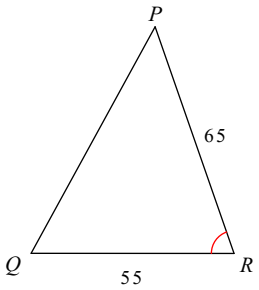
22)



State if the triangles in each pair are similar. If so, state how you know they are similar, the scale factor, and complete the similarity statement.

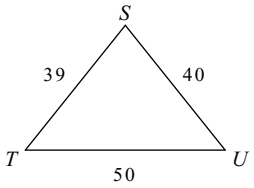
23)

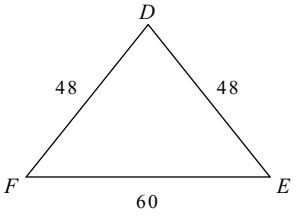




$\triangle RQP \sim$ _____

24)

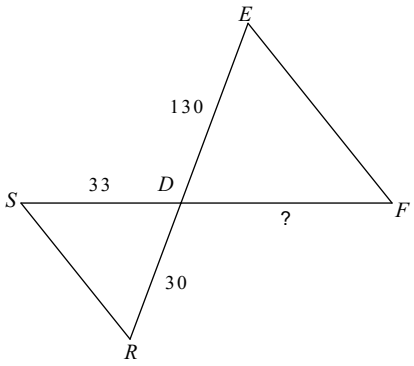




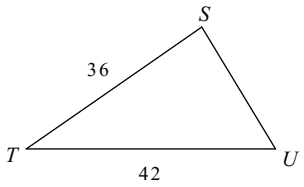
$\triangle FED \sim$ _____

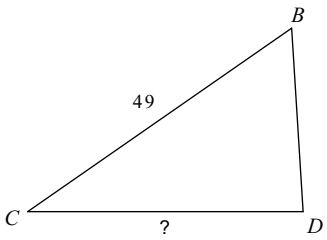
Find the missing length. The triangles in each pair are similar.

25)



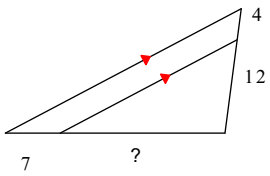
26)





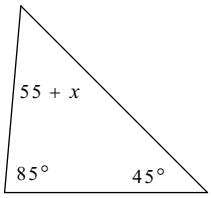
Find the missing length indicated.

27)



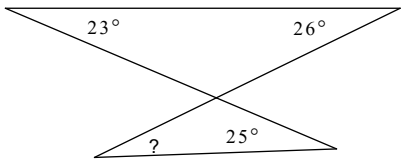
Solve for *x*.

28)



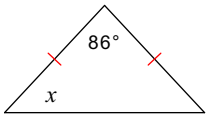
Find the measure of each angle indicated.

29)



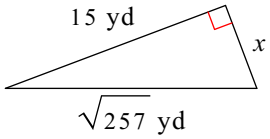
Find the value of *x*.

30)

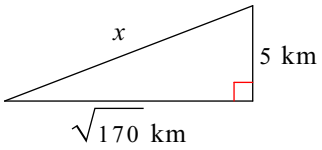


Find the missing side of each triangle. Leave your answers in simplest radical form.

31)

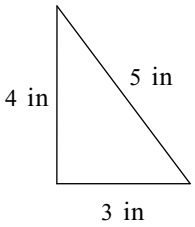


32)

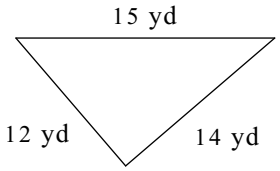


State if each triangle is acute, obtuse, or right.

33)

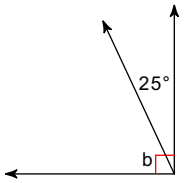


34)

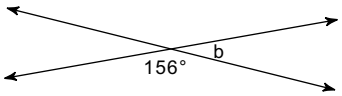


Find the measure of angle b.

35)

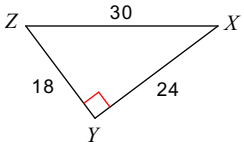


36)

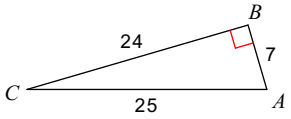


Find the value of each trigonometric ratio to the nearest ten-thousandth.

37) tan X

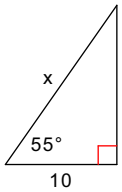


38) cos A

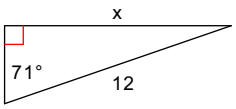


Find the missing side. Round to the nearest tenth.

39)

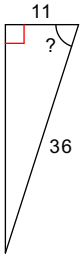


40)

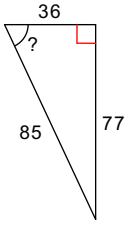


Find the measure of the indicated angle to the nearest degree.

41)



42)

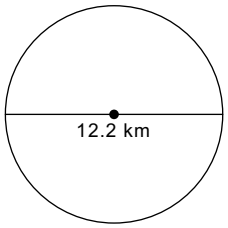


43) Kyle is standing on a building. In the distance he sees his car which is parked 27 feet from the building. The car is also 35 feet away from Kyle. What is the angle of depression from Kyle's point of view? Round to the nearest hundredth place.

44) A ship is trying to steer through the foggy waters. In the distance, they see a lighthouse that is 73 feet tall. The angle of elevation from the ship is 21°. How far is the horizontal distance between the ship and the lighthouse?

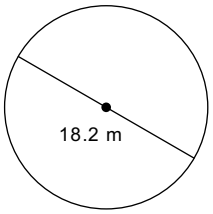
Find the area of each.

45)



Find the circumference.

46)



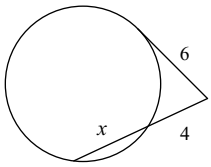
Find the radius of each circle.

47) circumference = 66 in

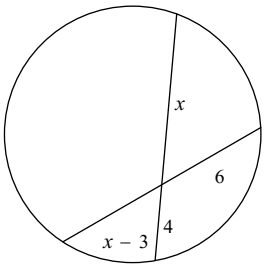
48) area = 452.4 cm²

Solve for *x*. Assume that lines which appear tangent are tangent.

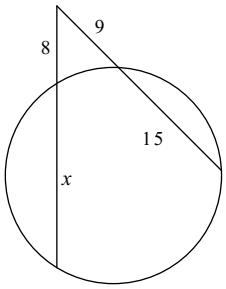
49)



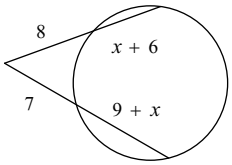
50)



51)

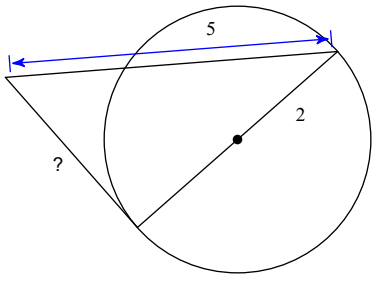


52)



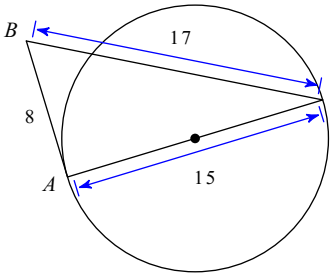
Find the segment length indicated. Assume that lines which appear to be tangent are tangent.

53)



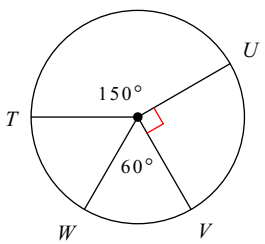
Determine if line AB is tangent to the circle.

54)

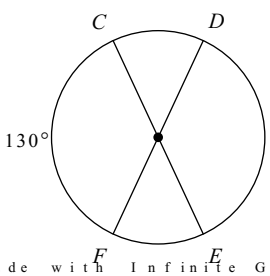


Find the measure of the arc or central angle indicated. Assume that lines which appear to be diameters are actual diameters.

55) $m\widehat{UVT}$

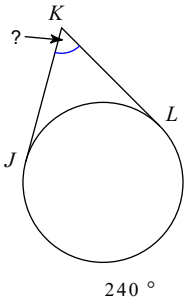


56) $m\widehat{EF}$

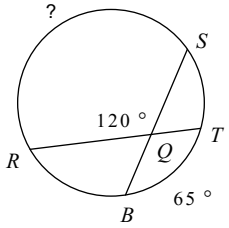


Find the measure of the arc or angle indicated. Assume that lines which appear tangent are tangent.

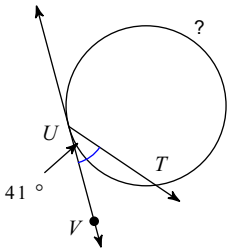
57)



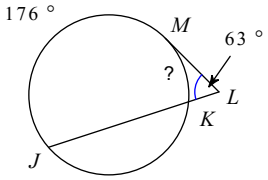
58)



59)

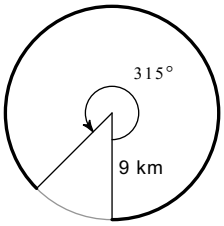


60)



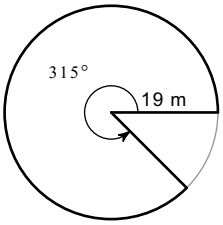
Find the length of each arc. Round your answers to the nearest tenth.

61)



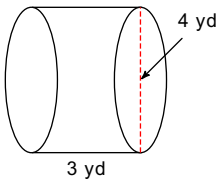
Find the area of each sector.

62)

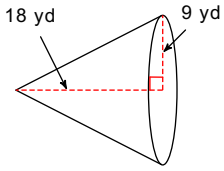


Find the volume of each figure. Round your answers to the nearest hundredth, if necessary.

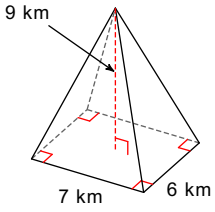
63)



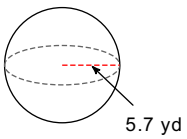
64)



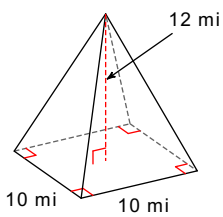
65)



66)



67)



Write each expression in radical form.

68) $(10x)^{\frac{5}{2}}$

69) $(3a)^{\frac{8}{5}}$

Write each expression in exponential form.

70) $\left(\sqrt[3]{x}\right)^2$

71) $\left(\sqrt[5]{3x}\right)^3$

Simplify.

72) $-3\sqrt{45} - 3\sqrt{5} - 2\sqrt{24}$

73) $-3\sqrt{6} - 3\sqrt{54} - \sqrt{20}$

74) $-\sqrt[3]{6} - 2\sqrt[3]{3} + 3\sqrt[3]{3}$

75) $-\sqrt[4]{80} + 2\sqrt[4]{405} - \sqrt[4]{5}$

76) $\sqrt{5}\left(2 - \sqrt{10}\right)$

77) $\sqrt{3}\left(-2\sqrt{5} + \sqrt{3}\right)$

78) $\frac{2\sqrt{6}}{2\sqrt{50}}$

79) $\frac{3\sqrt{15}}{\sqrt{5}}$

80) $\frac{5}{\sqrt{3} - 3}$

81) $\frac{\sqrt{2}}{4 - 3\sqrt{5}}$

82) $(2 + 3i)(-1 - 2i)$

83) $(6 - 4i)(2 - 5i)$

84) $(-8 + 8i)(-6 + 8i)$

85) $(2 - 3i)(-7 + 5i)$

86) $\frac{8}{4i}$

87) $\frac{9}{7i}$

88) $\frac{i}{-5 + 6i}$

89) $\frac{6}{-7 - 7i}$

90) i^{38}

91) i^{29}

92) i^{44}

93) i^{15}

Simplify. Your answer should contain only positive exponents.

94) $\frac{3n^3 \cdot 3n^4}{3n^{-2}}$

95) $\frac{2x^4 \cdot x^{-4}}{2x^{-1}}$

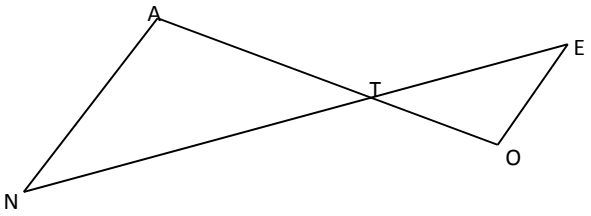
96) $\frac{x^3 \cdot x^2 y^4 \cdot \left(yx^3\right)^{-2}}{2x^4 y^{-3}}$

97) $\frac{\left(2uv^2\right)^4}{v^{-1}u^4}$

98)

Given: $\angle A \cong \angle O$

Prove: $\Delta TAN \sim \Delta TOE$

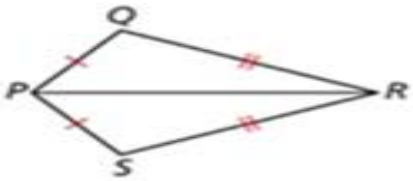


Statements	Reasons
1)	1)
2)	2)
3)	3)

99)

Given: $\overline{PQ} \cong \overline{PS}$, $\overline{RQ} \cong \overline{RS}$

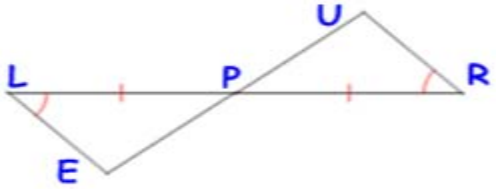
Prove: $\Delta PQR \cong \Delta PSR$



Statements	Reasons
$\overline{PQ} \cong \overline{PS}$, $\overline{RQ} \cong \overline{RS}$	
$\overline{PR} \cong \overline{PR}$	
$\Delta PQR \cong \Delta PSR$	

100) Given: $\overline{LP} \cong \overline{RP}$, $\angle L \cong \angle R$

Prove: $\angle E \cong \angle U$

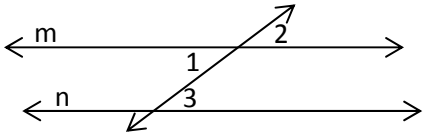


Statements	**Reasons**
$\overline{LP} \cong \overline{RP}$, $\angle L \cong \angle R$	
$\angle LPE \cong \angle RPU$	
$\Delta PUR \cong \Delta PEL$	
$\angle E \cong \angle U$	

101)

Given: $\angle 1 \cong \angle 3$

Prove: $m \parallel n$

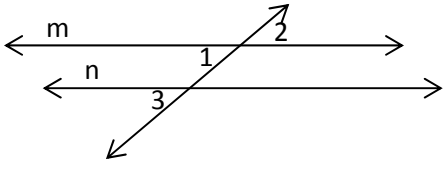


Statements	**Reasons**
$\angle 1 \cong \angle 3$	
$\angle 1 \cong \angle 2$	
$\angle 2 \cong \angle 3$	
$m \parallel n$	

102)

Given: $m \parallel n$

Prove: $\angle 2 \cong \angle 3$



Statements	**Reasons**
$m \parallel n$	
$\angle 1 \cong \angle 3$	
$\angle 1 \cong \angle 2$	
$\angle 2 \cong \angle 3$	