Teachers: **Tober**

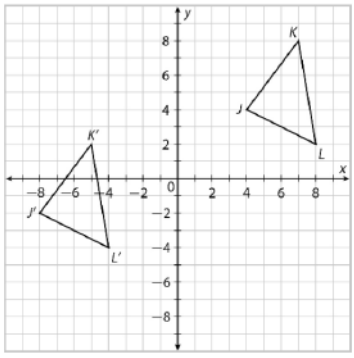
Course: **Geometry**

Assignment: **Week 5 – Course Review**

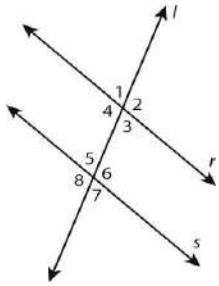
Geometry – End of Course Study Guide **Name** _____

Question 1 – $\overline{XY}$ has endpoints at *X*(3, –5) and *Y*(–2, 1). What is the length of $\overline{XY}$?

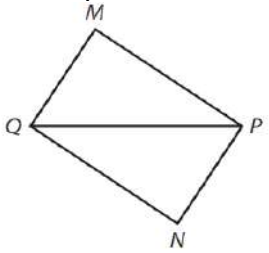
Question 2 – Describe the transformation that maps ΔJKL to $\Delta J'K'L'$?



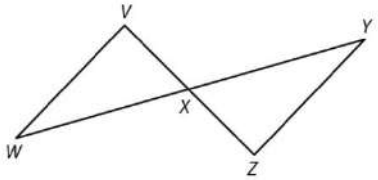
Question 3 – If *r* is parallel to *s*, which theorem explains why $\angle 2 \cong \angle 6$?



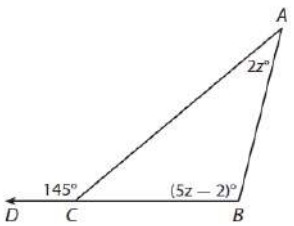
Question 4 – Given $\angle MQP \cong \angle$NPQ , what additional information is needed to prove that Δ *MQP* is congruent to Δ *NPQ* by the SAS theorem?



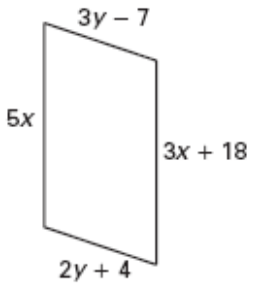
Question 5 – Point *X* is the midpoint of *VZ*. Can you conclude that Δ*VWX* is congruent to Δ*ZYX*? If so, explain your answer. If there is not enough information, explain what additional information is needed.



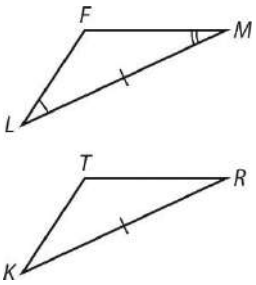
Question 6 – In ΔABC what is $m\angle B$?



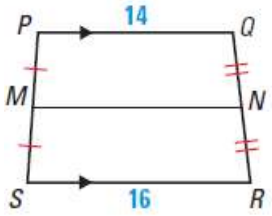
Question 7 – Find the values of x and y given that figure is a parallelogram.



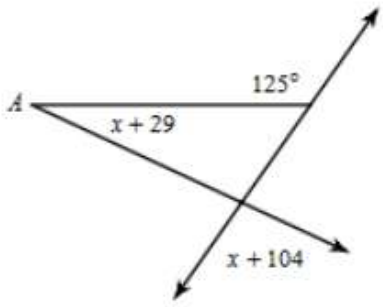
Question 8 – What additional information is needed to prove that triangle *LFM* is congruent to triangle *KTR*?



Question 9 – In trapezoid PQRS, find MN.



Question 10 – Find x.



Question 11 – Which of the following quadrilaterals have the given property? Write the letter(s) that apply.

All sides are congruent. _____

All angles are congruent. _____

The diagonals are congruent. _____

Opposite angles are congruent. _____

A. Parallelogram

B. Rectangle

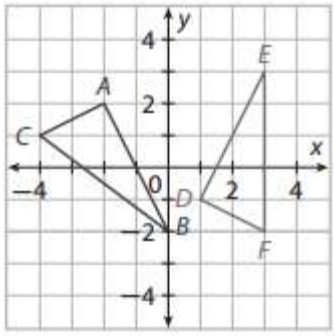
C. Rhombus

D. Square

Question 12 – Draw a trapezoid *JKLM* with $JK \parallel LM$. Match the pair of segments or angles with the term which describes them in trapezoid *JKLM*.

$\overline{JK}$ *and* $\overline{ML}$	_____	A. base angles
$\overline{MJ}$ *and* $\overline{KL}$	_____	B. consecutive sides
$\overline{ML}$ *and* $\overline{KL}$	_____	C. opposite angles
$\overline{JL}$ *and* $\overline{KM}$	_____	D. diagonals
$\angle K$ *and* $\angle M$	_____	E. bases
$\angle M$ *and* $\angle L$	_____	F. legs

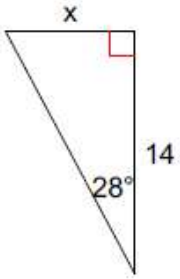
Question 13 – Are the triangles congruent? Justify your reasoning.



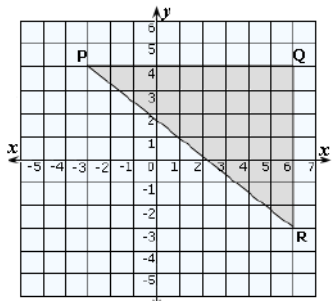
Question 14 – What is the sum of the interior angles of a hexagon (6-sided)?

Question 15 – In $\Delta ABC, m\angle A = 52°, m\angle B = 100°, m\angle C = 28°$. Write the side lengths in order from least to greatest.

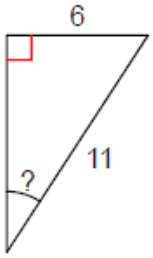
Question 16 - Find the value of X to the nearest tenth.



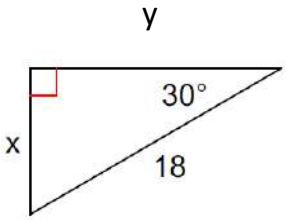
Question 17 - Find the length of the hypotenuse to the nearest tenths.



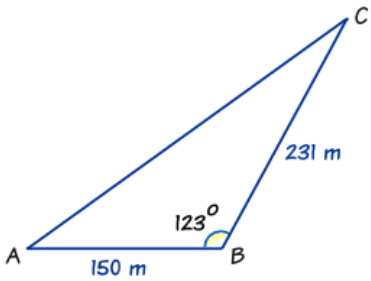
Question 18 - Find the measure of the missing angle to the nearest degree.



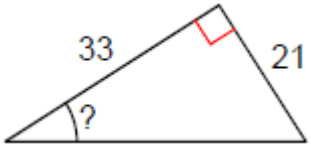
Question 19 - What are the missing side lengths of the triangle? Keep your answers in simplified radical form.



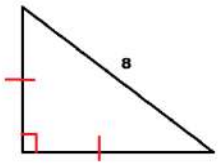
Question 20 -Find the area of triangle ABC.



Question 21 - Find the measure of the angle, round to the nearest tenth.



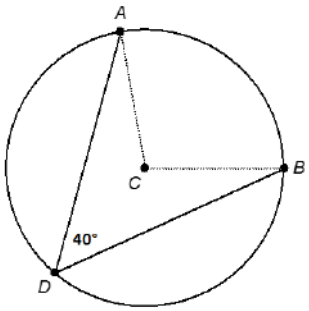
Question 22 - Find the missing angles and side lengths to the triangle below. Leave answers in simplified radical form.



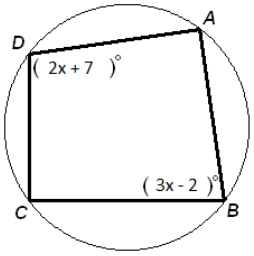
Question 23 - Simplify: $6\sqrt{6x} \bullet \sqrt{3x}$

Question 24 – Simplify: $\frac{15}{\sqrt{3}}$

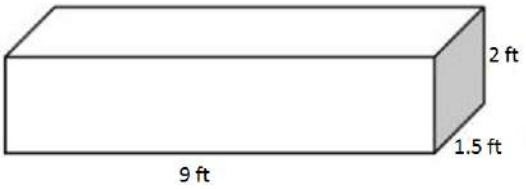
Question 25 – What is the measure of $\angle ACB$ below?



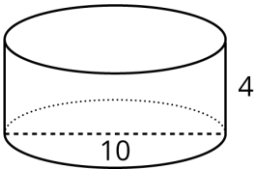
Question 26 – Quadrilateral ABCD is circumscribed by a circle, as shown in the diagram to the right. What is the measure of angle B?



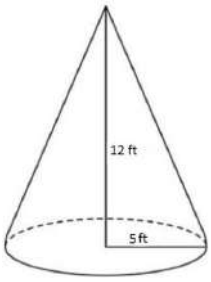
Question 27– A company makes specialized fish tanks for office buildings. What is the volume of the tank shown below?



Question 28 – Find the surface area of the cylinder. Leave your answer in terms of π.



Question 29 – Find the volume area of the cone below. Express your answer as a multiple of π.



Question 30 – Find the surface are of the sphere. Give an exact answer.