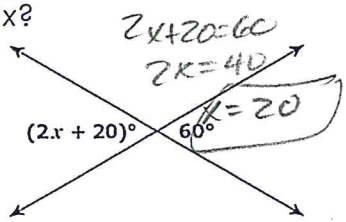
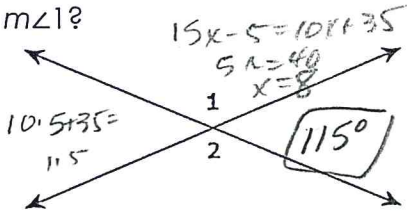
Geometry Semester 1 Exam Review

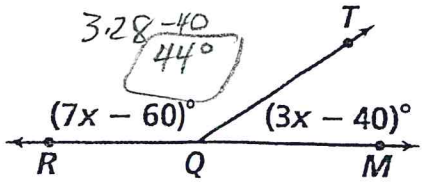
1. Two lines intersect as shown. What is the value of x?



2. In this figure, $m\angle 1=(15x-5)°$ and $m\angle 2=(10x+35)°$. What is $m\angle 1$?

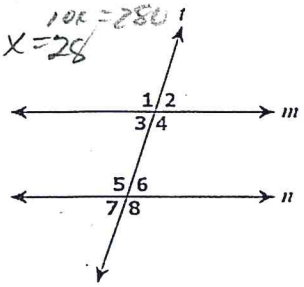


3. What is $m\angle TQM$?

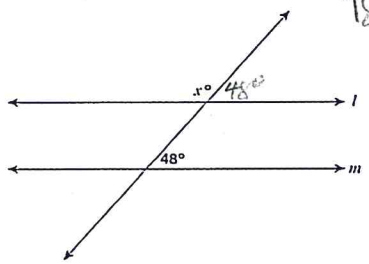


4. In this figure, line *t* is a transversal of lines *m* and *n*. Which of the following statements determines that lines *m* and *n* are parallel?

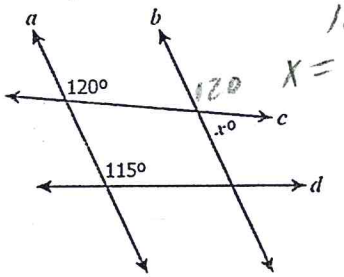
A. $\angle 2\cong\angle 7$ B. $\angle 1\cong\angle 4$
C. $\angle 3$ and $\angle 5$ are complementary
D. $\angle 6$and$\angle 8$are supplementary



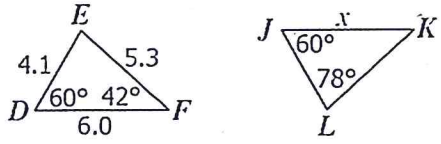
5. For what value of x is $l \parallel m$ in this figure?



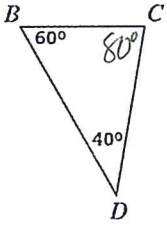
6. If $a \parallel b$, what is the value of x?



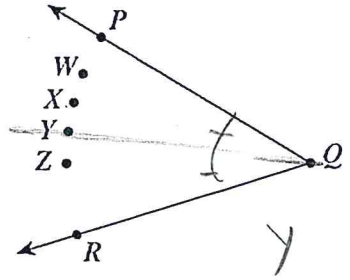
7. What value of x makes $\Delta DEF \cong \Delta JLK$?



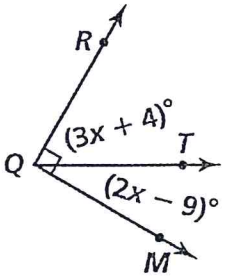
8. List the sides of ΔBCD in order from shortest to longest.



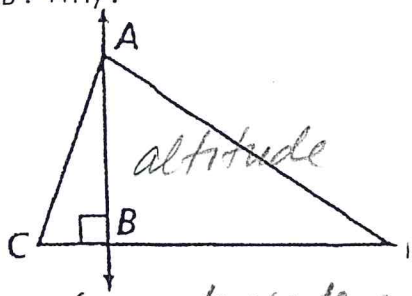
9. Which point lies on the bisector of $\angle PQR$?



10. What is $m\angle TQM$?



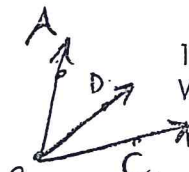
11. Which term best identifies $\overline{AB}$? Why?



12. Three survey markers are located on a map at points *H*, *I*, and *J*. A triangle is formed by connecting these markers by string so that *HI* =150 feet, *HJ* = 245 feet, and *IJ* = 365 feet. Which statement is true about the measures of the angles of ΔHIJ?

A. $m\angle H$ is the smallest
B. $m\angle H$ is the largest
C. $m\angle I$ is the smallest
D. $m\angle I$ is the largest

IJ is longest
$\angle H$ is largest



13. Let p=Two angles are adjacent. Let q=They share a common side.
Write the conditional statement p→q. Now write the inverse, converse, and contrapositive.

p→q If 2 angles are adjacent, then they share a common side.
Converse q→p If two angles share a common side, then they are adjacent.
Inverse If 2 $\angle$'s are not adjacent, then they do not share a common side.
If 2 angles do not share a common side, then they are not adjacent.

$\angle ABD$ & $\angle ABC$ are not adjacent but share BA

14. Provide a counterexample for the following statement: If an animal has four legs, then it is a dog.

A cat has 4 legs; it's not a dog

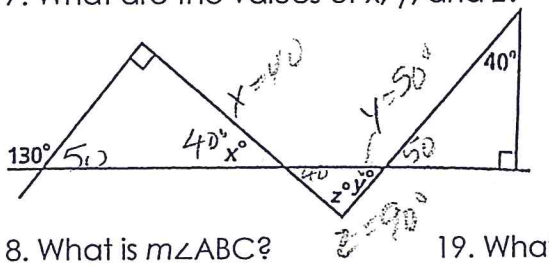
15. Identify the hypothesis and conclusion of the conditional: If a triangle is a right triangle, then its two acute angles are complementary. Conclusion hypothesis
What is the converse of the conditional statement?

If a Δ that 2 acute complementary angles then it is a right Δ have

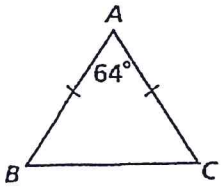
16. B is between A and C. If AB=3x+2, BC=5x-10, and AC=16, what is the value of x?

$3x+2+5x-10=16$
$8x-8=16$
$8x=24$ $x=3$

17. What are the values of x, y, and z?

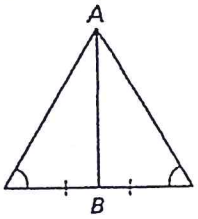


18. What is $m\angle ABC$?



180
-64
116/2 58°

19. What can you conclude about $\overline{AB}$?



it is a median —
it is also ...