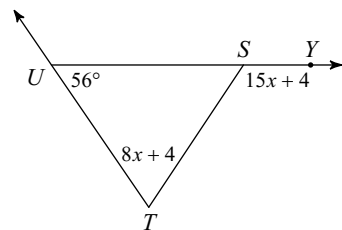


Geometry - Practice Exam 3 - Fall 2018

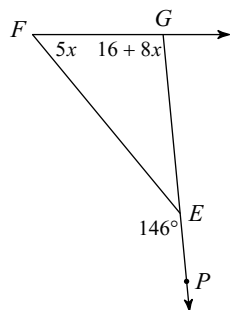
Solve for x .

1)



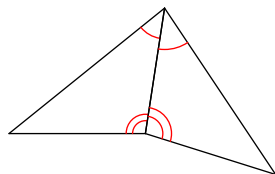
Find the measure of the angle indicated.

2) Find $m\angle FGE$.



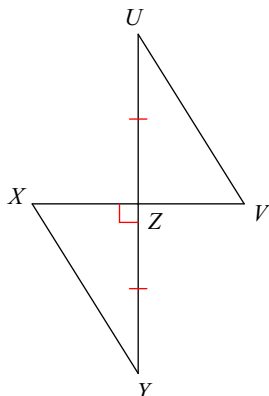
Determine if the two triangles are congruent. If they are, state how you know. HINT only 2 or 3 letters are needed to make a statement.

3)



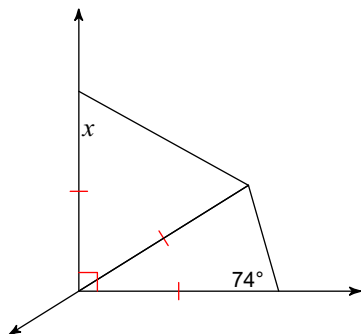
State what additional information is required in order to know that the triangles are congruent for the reason given. DO NOT FORGET TO MAKE A STATEMENT ABOUT THE MARKINGS YOU MADE. DO NOT WRITE A SENTENCE.

4) LA

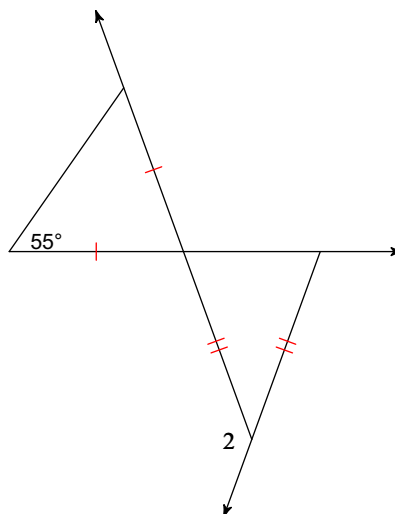


Find the value of x .

5)

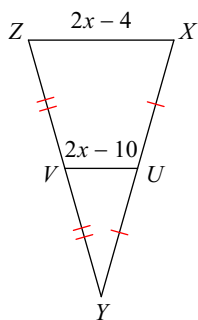


6) $m\angle 2 = x + 147$

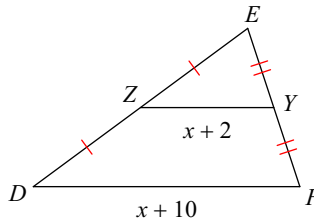


Solve for x .

7)

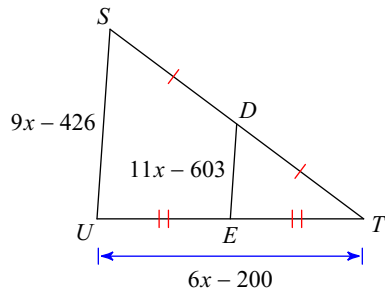


8)

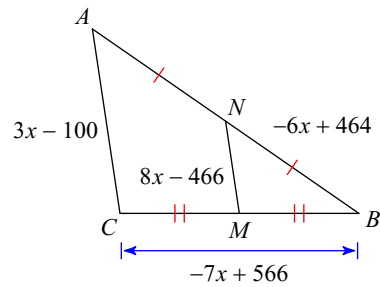


Find the missing length indicated.

9) Find DE

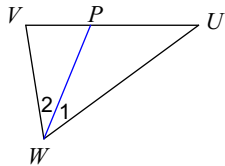


10) Find AC

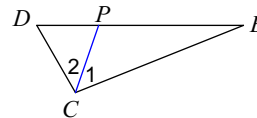


Each figure shows a triangle with one of its angle bisectors.

11) Find x if $m\angle 2 = 3x + 7$ and $m\angle UWW = 7x + 6$.

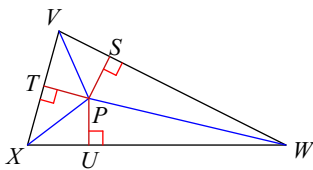


12) $m\angle 1 = 5x + 9$ and $m\angle ECD = 13x - 6$. Find x .

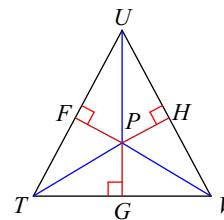


Each figure shows a triangle with its three angle bisectors intersecting at point P.

13) Find VT if $PT = 3$ and $VP = 5$.

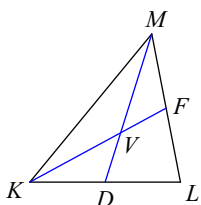


14) Find TG if $PG = 1$ and $TP = 3$.

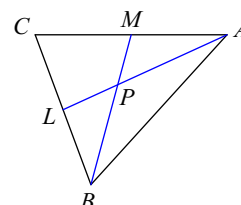


Each figure shows a triangle with one or more of its medians.

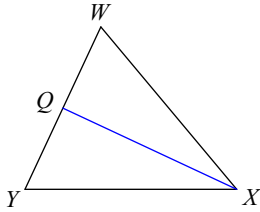
15) Find MV if $MD = 3$



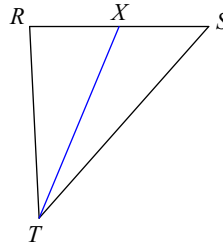
16) Find x if $BP = x + 10$ and $BM = 4x - 10$



17) Find x if $WY = x + 3$ and $QY = x - 4$

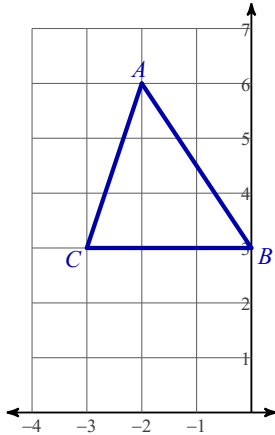


18) Find XS if $SR = 11x - 1$ and $XR = 4x + 1$



Find coordinates of the centroid of each triangle.

19)



Find the coordinates of the centroid of each triangle given the three vertices.

20) $W(9, 7)$, $X(9, 1)$, $Y(-8, 1)$

State if the three numbers can be the measures of the sides of a triangle.

21) 3, 10, 5

22) 12, 10, 9

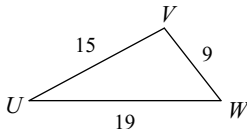
Two sides of a triangle have the following measures. Find the range of possible measures for the third side.

23) 8, 11

24) 7, 10

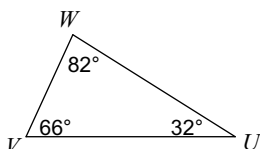
Name the largest and smallest angle in each triangle.

25)



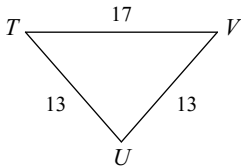
Order the sides of each triangle from shortest to longest.

26)



Order the angles in each triangle from smallest to largest.

27)



Read the question carefully and choose the best answer.

28) Lydia is trying to prove that a quadrilateral in a coordinate plane is a square. First, she uses the slope formula to prove that there are two pairs of parallel sides. Next, she uses the distance formula to prove that all sides are equal. What additional step must Lydia perform before reaching a conclusion that the quadrilateral is a square?

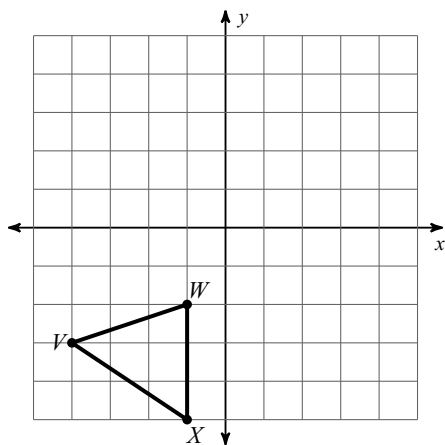
- A) Use the Pythagorean Theorem to prove that the diagonals of the quadrilateral are twice the length of each side.
- B) Use the slope formula to prove that four right angles exist as a result of perpendicular sides.
- C) Use the distance formula to prove that the diagonals of the quadrilateral are not equal.
- D) Use the midpoint formula to prove that the diagonals of the quadrilateral do not bisect each other

29) If a pair of parallel lines are rotated, which is true?

- A) The lines remain parallel only if rotated 180° .
- B) The lines remain parallel only if rotated 360° .
- C) Rotated parallel lines always remain parallel lines.
- D) Rotating parallel lines result in perpendicular lines.

Graph the image of the figure using the transformation given.

30) reflection across $y = x$



Answers to Geometry - Practice Exam 3 - Fall 2018

- | | | |
|---|------------------------------------|---|
| 1) 8 | 2) 96° | 3) ASA |
| 4) $\angle Y \cong \angle U$ or $\angle X \cong \angle V$ | 5) 61° | 6) -7 |
| 7) 8 | 8) 6 | 9) 57 |
| 11) 8 | 12) 8 | 10) 92 |
| 15) 2 | 16) 10 | 13) 4 |
| 19) $\left(-\frac{5}{3}, 4\right)$ | 20) $\left(\frac{10}{3}, 3\right)$ | 17) 11 |
| 23) $3 < x < 19$ | 24) $3 < x < 17$ | 18) 5 |
| 27) $\angle V$ and $\angle T$; $\angle U$ | 28) B | 21) No |
| 30) | | 22) Yes |
| | | 25) $\angle V, \angle U$ |
| | | 26) $\overline{VW}, \overline{UW}, \overline{UV}$ |
| | | 29) C |

