

Formal Geometry Assignments 2023-24

Chapter 4: CONGRUENT TRIANGLES

Day	Date	Assignment (Due the next class meeting)
Tuesday Wednesday	10/24/23 (A) 10/25/23 (B)	Chapter 2 Part II Test <ul style="list-style-type: none"> • 4.1 pg. 286 – 290 #18 – 22 even, 24 – 31, 36 – 38, 47, 50, 53, 55 • 4.1 Extra Problems #1 – 3
Thursday	10/26/23 (A)	<ul style="list-style-type: none"> • 4.2 pg. 295 – 299 #13 – 16, 18 – 20, 28, 37, 39, 44, 45, 47 • 4.2 Extra Problems #1 – 5
Nevada Day 10/27/23		
Monday	10/30/23 (B)	<ul style="list-style-type: none"> • 4.2 pg. 295 – 299 #13 – 16, 18 – 20, 28, 37, 39, 44, 45, 47 • 4.2 Extra Problems #1 – 5
Tuesday Wednesday	10/31/23 (A) 11/01/23 (B)	<ul style="list-style-type: none"> • 4.3 pg. 305 – 308 #9 – 11, 16 – 19, 31, 38 • 4.3 Extra Problems #1 – 5
Thursday Friday	11/02/23 (A) 11/03/23 (B)	<ul style="list-style-type: none"> • 4.4 Worksheet • 4.5 Worksheet
Monday Tuesday	11/06/23 (A) 11/07/23 (B)	Congruent Triangles Quiz <ul style="list-style-type: none"> • 4.6 pg. 330 – 333 #19 – 22, 29 – 32, 38, 49, 53 • 4.6 Extra Problems #1 – 9
Wednesday Thursday	11/09/23 (A) 11/10/23 (B)	<ul style="list-style-type: none"> • 4.7 Worksheet • Chapter 4 Review Worksheet
Veteran's Day 11/10/23		
Monday Tuesday	11/13/23 (A) 11/14/23 (B)	Study
Wednesday Thursday	11/15/23 (A) 11/16/23 (B)	Chapter 4 Test

- **Each problem will be worth 1 point unless specified.**
- **Corrections are expected to be done to earn back points missed for each assignment.**
- **All assignments must be complete the day that they are due to receive full credit.**
 - Every problem must be attempted with the picture drawn and work shown.
 - Proofs must be attempted to at least 2 steps, with diagram drawn and set-up shown.

Need extra help? Try www.khanacademy.org or see your teacher for help.

Online Textbook Login Information:

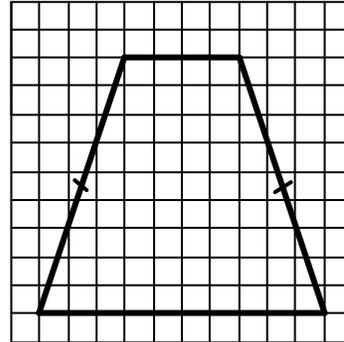
1. From the school: Sign into a district computer with your student ID# and password.
 - Go to www.washoeschools.net
 - Click on Student and Parent
 - Click on McGraw Hill
 - Click on Sign In
2. If at home: Go to www.washoeschools.net
 - Click on Student and Parent
 - Click on McGraw Hill
 - Click on Sign In – sign in using **Washoe\studentID#**, and then your school password. (Note: use a back slash not a forward slash.)

4.1 Extra Problems

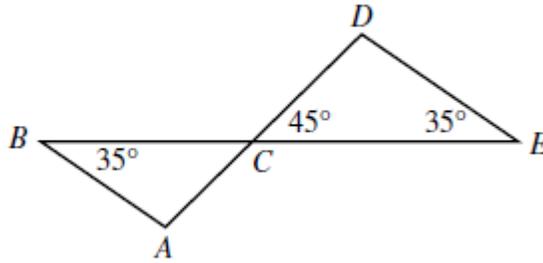
1) Intersecting lines form vertical angles $\angle 1$ and $\angle 3$ and supplementary angles $\angle 2$ and $\angle 3$. The measure of $\angle 2$ is 53° . What is the measure of $\angle 1$?

2) What is the best approximate perimeter of this isosceles trapezoid?

- A. 19 units
- B. 21 units
- C. 31 units
- D. 33 units



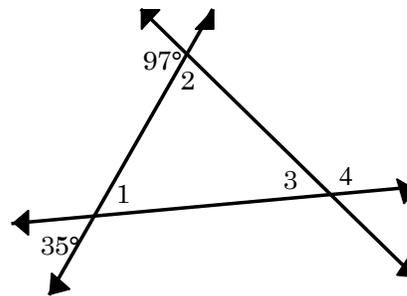
3) In the figure below, C is the intersection of \overline{AD} and \overline{BE} . If it can be determined, what is the measure of $\angle BAC$?



- A. 80°
- B. 100°
- C. 110°
- D. 115°
- E. Cannot be determined from the given information

4.2 Extra Problems (Do #1 – 5... continued on next page!)

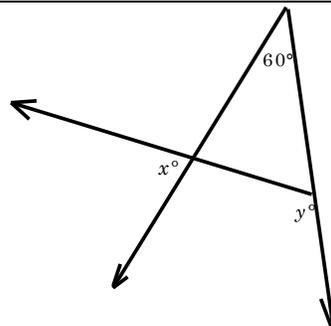
1) In the figure, what is the $m\angle 4$?



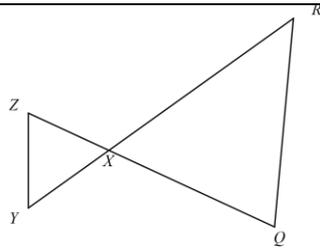
2) Given $\triangle ABC$ with vertices at $A(5, -2)$, $B(7, 2)$, $C(3, 5)$, what is the classification of the triangle by its sides? Work must be shown!

3) What is the value of y in terms of x ?

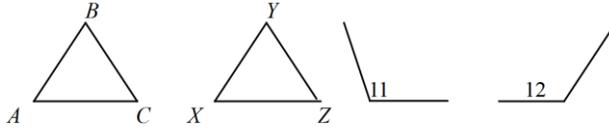
- A. $y = x + 60$
- B. $y = 2x$
- C. $y = 300 - x$
- D. $y = 120 - x$



4) Given: $\triangle XYZ \cong \triangle XRQ$
 Prove: X is the midpoint of \overline{YR}



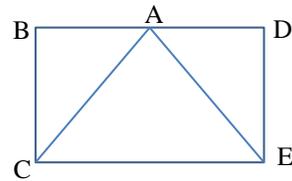
5)
 Given: $\triangle ABC \cong \triangle XYZ$,
 $\angle 11$ supp $\angle B$, $\angle 12$ supp $\angle Y$



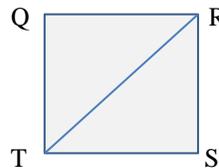
Prove: $\angle 11 \cong \angle 12$

4.3 Extra Problems

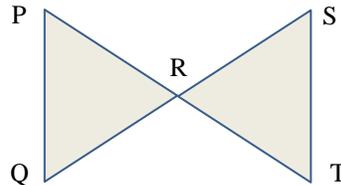
1)
 Given: $\overline{CB} \cong \overline{ED}$, $\overline{CA} \cong \overline{AE}$, and
 \overline{AC} bisects \overline{BD}
 Prove: $\triangle ABC \cong \triangle ADE$



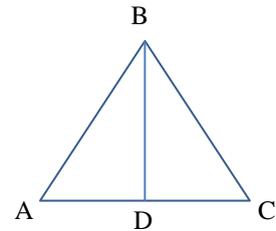
2) Given: $\overline{QR} \cong \overline{SR}$, $\overline{ST} \cong \overline{QT}$
 Prove: $\triangle QRT \cong \triangle SRT$



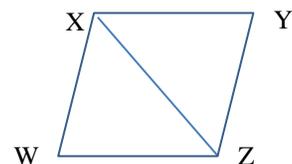
3)
 Given: R is the midpoint of \overline{QS} and \overline{PT} .
 Prove: $PQ \cong TS$



4)
 Given: $\overline{BD} \perp \overline{AC}$, \overline{BD} bisects \overline{AC}
 Prove: $\triangle ABD \cong \triangle CBD$



5)
 Given: $\overline{YX} \cong \overline{WZ}$, $\overline{YX} \parallel \overline{ZW}$
 Prove: $\triangle YXZ \cong \triangle WZX$

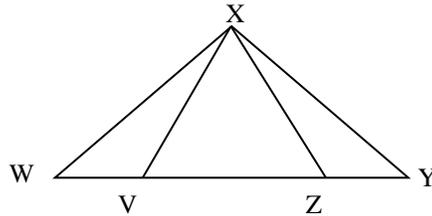


4.6 Extra Problems: Do #1 – 9...Continued on the next page.

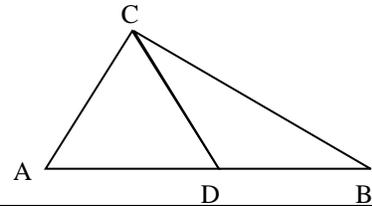
1) Suppose one base angle of an isosceles triangle is equal to 48° . Find the measure of the vertex angle.

2) **Given:** $\angle W \cong \angle Y$, $\overline{WV} \cong \overline{ZY}$

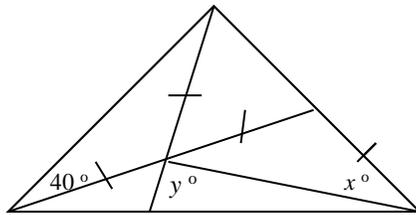
Prove: $\triangle XWV \cong \triangle XYZ$



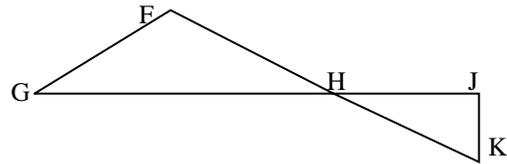
3) Triangle ACD is equilateral, and triangle BCD is isosceles with base BC. Find the measure of $\angle BCD$.



4) Find x and y .

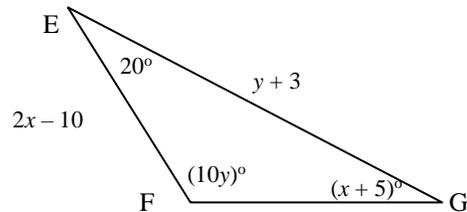


5) **Given:** $\overline{FG} \cong \overline{FH}$
Prove: $\angle G \cong \angle JHK$

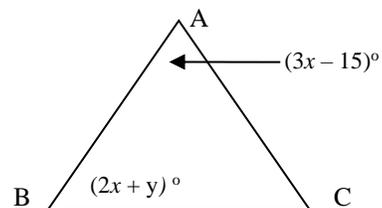


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6) Find the perimeter of isosceles $\triangle EFG$ with base EG.

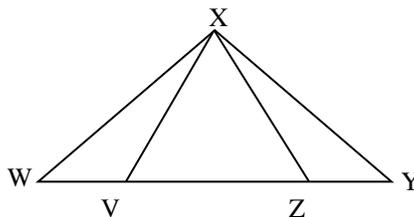


7) $\triangle ABC$ is an equilateral triangle. Find the value of x and y .



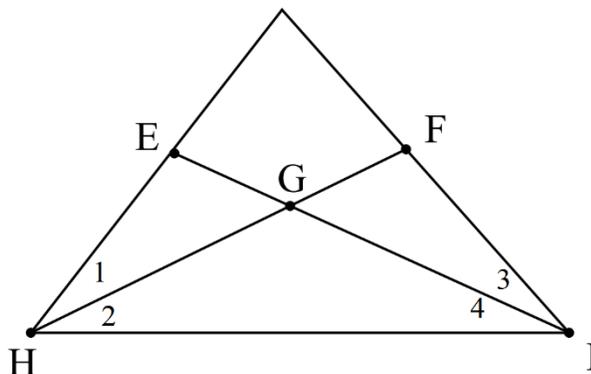
8) **Given:** $\angle XVZ \cong \angle XZV$, $\overline{WV} \cong \overline{ZY}$

Prove: $\angle W \cong \angle Y$



9) **Given:** $\angle 1 \cong \angle 3$, $\angle 2 \cong \angle 4$

Prove: $\overline{EH} \cong \overline{FI}$



Answers for selected Extra Problems:

4.1 1) 127 degrees 2) D 3) B

4.2 1) 118° 2) scalene (find each distance or side length)

Most Efficient Proofs: 4) 3 steps 5) 3 steps

4.3 **Most Efficient Proofs:** 1) 3 steps 2) 3 steps 3) 5 steps 4) 6 steps 5) 4 steps

4.6 1) 84 2) can be done in 3 steps 3) 30 4) $x = 25^\circ$, and $y = 75^\circ$

Most Efficient Proofs: 5) 4 steps 8) 6 steps 9) 5 steps