

4.1 PRE-TEST

Course name: Geometry Geometry Essential Skills

Professor name: Homeschool Studies

College name: Homeschool Studies

Course code:

Section code:

Directions: Ready to test your smarts?

Have a shot at this 16-question practice test!

Take it as many times as you want to. Once you're done, be sure to click the "Guide" button to review any questions you missed, a step-by-step explanation for the question, and a link to the video where that content is discussed.

Need Help? No Problem! Contact support@thinkwell.com with questions.

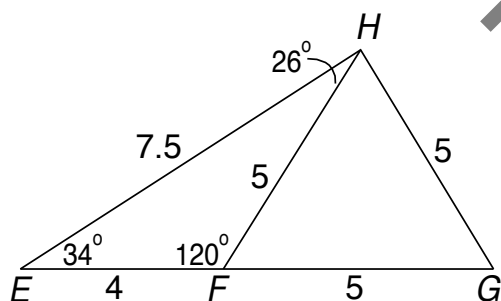
Please note:

All actual course exercises, quizzes, and tests will be delivered online. This is a sample print of an online Test.

Question: 1 QID: 95574

Classify $\triangle FGH$ by its angles and sides.

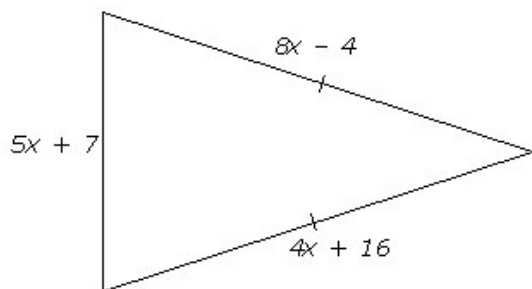
- obtuse; equilateral
 right; scalene
 obtuse; isosceles
 acute; equilateral



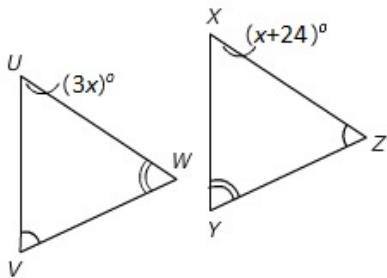
Question: 2 QID: 95570

Identify the side lengths of the triangle.

- 30; 30; 21
 30; 30; 28
 36; 36; 32
 36; 36; 40

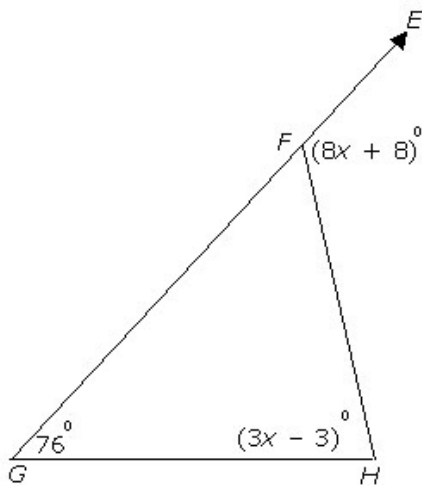


Question: 3 QID: 102557

Identify $m\angle U$ and $m\angle X$.

- $36^\circ, 36^\circ$
 $48^\circ, 48^\circ$
 $36^\circ, 72^\circ$
 $18^\circ, 30^\circ$

Question: 4 QID: 95573

Identify $m\angle EFH$.

- $m\angle EFH = 100^\circ$
 $m\angle EFH = 110^\circ$
 $m\angle EFH = 112^\circ$
 $m\angle EFH = 134^\circ$

Question: 5 QID: 95180

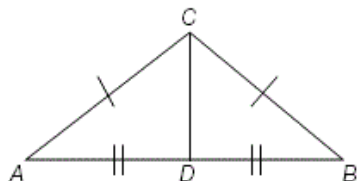
$\triangle STR \cong \triangle LMN$, $SR = 7b + 8$ and $LN = 11b - 12$. Find b and SR .

- $b = 5$ and $SR = 67$
 $b = 3$ and $SR = 67$
 $b = 3$ and $SR = 43$
 $b = 5$ and $SR = 43$

Question: 6 QID: 95185

Question: 7 QID: 97625

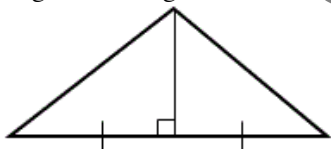
$\triangle ABC$ is divided into two congruent triangles. Which of the following congruency statements is **incorrect**?



- $\triangle CDA \cong \triangle CDB$
- $\triangle CAD \cong \triangle CBD$
- $\triangle ACD \cong \triangle BCD$
- All three statements are correct.

Question: 8 QID: 97627

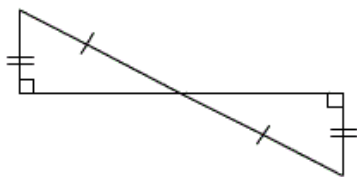
Which postulate, if any, can be used to prove that the triangles are congruent?



- SSS
- SAS
- neither

Question: 9 QID: 95605

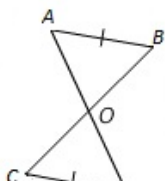
Identify the postulate that proves the triangles are congruent.



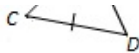
- SSS
- HL
- SAS
- ASA

Question: 10 QID: 95607

Given that $\overline{AB} \parallel \overline{CD}$, identify the postulate that proves the triangles are congruent.

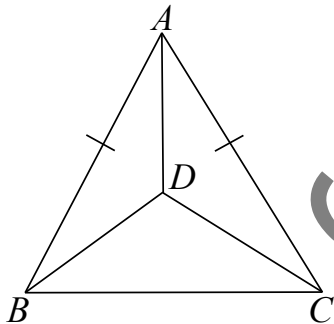


- SSS or ASA
- ASA or AAS
- HL or SAS
- ASA or HL



Question: 11 QID: 101486

Given that $\overline{AB} \cong \overline{AC}$ and \overline{AD} bisects $\angle BAC$, prove that $\triangle BDC$ is an isosceles triangle.



1. $\overline{AB} \cong \overline{AC}$ (Given)
2. \overline{AD} bisects $\angle BAC$. (Given)
3. $\angle BAD \cong \angle CAD$ (Def. of \angle bisector)
4. $\overline{AD} \cong \overline{AD}$ (Reflex. Prop of \cong)
5. $\triangle BAD \cong \triangle CAD$ (SAS Steps 1, 3, 4)
6. $\angle ABD \cong \angle ACD$ (CPCTC)
7. $\angle DBC \cong \angle DCB$ (Def of isosceles \triangle)
8. $\angle ABD + \angle DBC \cong \angle ABC$ (Angle Add. Post)
9. $\angle ACD + \angle DCB \cong \angle ACB$ (Angle Add. Post)
10. $\angle ABC \cong \angle ACB$ (Subst. Property)
11. $\triangle BDC$ is isosceles (Def of isosceles \triangle)

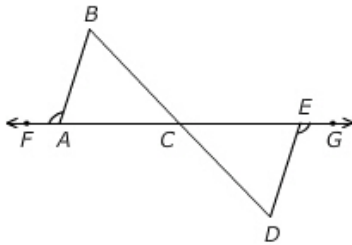
1. $\overline{AB} \cong \overline{AC}$ (Given)
2. \overline{AD} bisects $\angle BAC$. (Given)
3. $\angle BAD \cong \angle CAD$ (Def. of \angle bisector)
4. $\overline{AD} \cong \overline{AD}$ (Reflex. Prop of \cong)
5. $\triangle BAD \cong \triangle CAD$ (SAS Steps 1, 3, 4)
6. $\angle ABC \cong \angle ACB$ (CPCTC)
7. $\triangle BDC$ is isosceles (Def of isosceles \triangle)

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2. \overline{AD} bisects $\angle BAC$. (Given)
3. $\angle BAD \cong \angle CAD$ (Def. of \angle bisector)
4. $\overline{AD} \cong \overline{AD}$ (Reflex. Prop of \cong)
5. $\triangle BAD \cong \triangle CAD$ (SAS Steps 1, 3, 4)
6. $\overline{BD} \cong \overline{DC}$ (CPCTC)
7. $\triangle BDC$ is isosceles (Def of isosceles \triangle)

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2. \overline{AD} bisects $\angle BAC$. (Given)
3. $\angle BAD \cong \angle CAD$ (Def. of \angle bisector)
4. $\overline{AD} \cong \overline{AD}$ (Reflex. Prop of \cong)
5. $\triangle BAD \cong \triangle CAD$ (SAS Steps 1, 3, 4)
6. $\triangle ABC$ is isosceles (Def of isosceles \triangle)
7. $\angle ABC \cong \angle ACB$ (CPCTC)
8. $\triangle BDC$ is isosceles (Def of isosceles \triangle)

Question: 12 QID: 102634

Given that C is the midpoint of \overline{FE} and that $\angle BAF \cong \angle DEG$, which of the following triangle congruence statements can be used to prove $\overline{BA} \cong \overline{DE}$?



- Side-Side-Side Congruence
- Angle-Angle-Side Congruence
- Angle-Side-Angle Congruence
- Side-Angle-Side Congruence

Question: 13 QID: 102810

Which of the following are the coordinates of a rectangle with a length of 5 units and width of 2 units in the coordinate plane?

- $(-3, 0), (-7, -2), (-3, -2), (-7, 0)$
- $(1, -3), (6, -3), (1, 0), (6, 0)$
- $(-2, -4), (-2, -2), (2, -4), (2, -2)$
- $(1, 4), (-4, 4), (1, 6), (-4, 6)$

Question: 14 QID: 101400

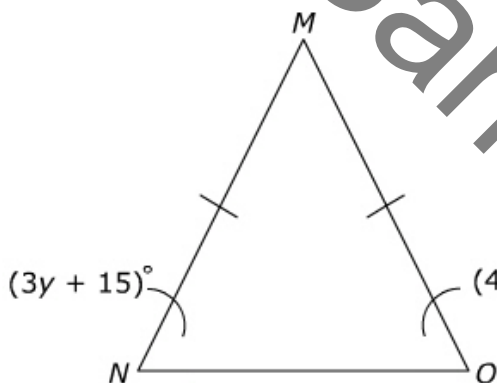
Given that rectangle $JKLM$ has coordinates $J(0, 0)$, $K(10, 0)$, $L(10, 8)$, and $M(0, 8)$, T is the midpoint of \overline{JK} , and V is the midpoint of \overline{ML} , which of the following proves that $TV = JM$?

- By the Midpoint Formula, the coordinates of T are $(5, 8)$ and the coordinates of V are $(5, 0)$. Then $TV = 8$, and $JM = 8$. Thus $TV = JM$.

- By the Midpoint Formula, the coordinates of T are $(5, 0)$ and the coordinates of V are $(5, 8)$.
Then $TV = 8$, and $JM = 8$.
Thus $TV = JM$.
- By the Distance Formula, the coordinates of T are $(5, 0)$ and the coordinates of V are $(8, 5)$.
Then $TV = 8$, and $JM = 8$.
Thus $TV = JM$.
- By the Distance Formula, the coordinates of T are $(5, 0)$ and the coordinates of V are $(5, 8)$.
Then $TV = 5$, and $JM = 5$.
Thus $TV = JM$.

Question: 15 QID: 95188

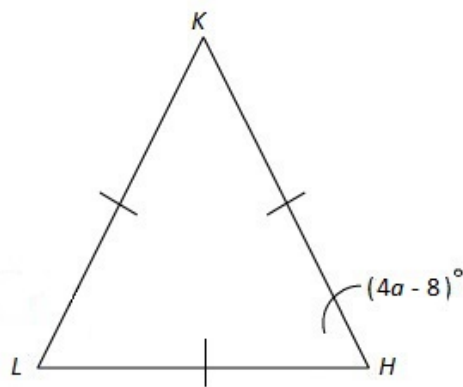
Find the measures of $\angle N$ and $\angle O$.



- $\angle N = 54^\circ$ and $\angle O = 54^\circ$
- $\angle N = 69^\circ$ and $\angle O = 69^\circ$
- $\angle N = 21^\circ$ and $\angle O = 21^\circ$
- $\angle N = 72^\circ$ and $\angle O = 79^\circ$

Question: 16 QID: 102583

Find the value of a .



- $a = 17$
- $a = 13$
- $a = 25$
- $a = 68$