

Chapter 3: Triangles / Polygons
Lesson 3-1: Triangle Fundamentals
Homework

name _____
date _____
period ____

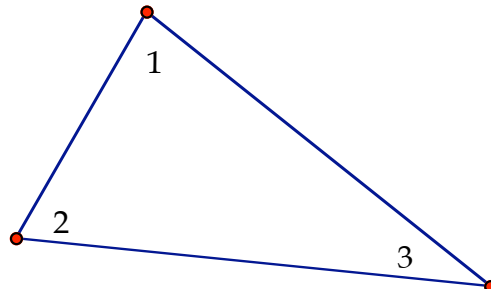
1. If $m\angle 1 = 28^\circ$ and $m\angle 2 = 67^\circ$, find $m\angle 3$. _____

2. If $m\angle 1 = 107^\circ$ and $m\angle 3 = 37^\circ$, find $m\angle 2$. _____

3. If $m\angle 2 = 34^\circ$ and $m\angle 3 = 67^\circ$, find $m\angle 1$. _____

4. If $m\angle 1 = 16^\circ$ and $m\angle 2 = 35^\circ$, find $m\angle 3$. _____

5. If $m\angle 3 = 88^\circ$ and $m\angle 2 = 47^\circ$, find $m\angle 1$. _____



6. If $m\angle 1 = x + 30$, $m\angle 2 = x - 23$ and $m\angle 3 = 2x - 7$, find x and the value of each numbered angle.

$x =$ _____, $m\angle 1 =$ _____, $m\angle 2 =$ _____, $m\angle 3 =$ _____

7. If $m\angle 1 = 9x$, $m\angle 2 = 2x$ and $m\angle 3 = 7x$, find x and the value of each numbered angle.

$x =$ _____, $m\angle 1 =$ _____, $m\angle 2 =$ _____, $m\angle 3 =$ _____

8. If $m\angle 1 = 3x + 20$, $m\angle 2 = 2x - 25$ and $m\angle 3 = 5x + 10$, find x and the value of each numbered angle.

$x =$ _____, $m\angle 1 =$ _____, $m\angle 2 =$ _____, $m\angle 3 =$ _____

9. If $m\angle 1 = 72^\circ$ and $m\angle 3 = 25^\circ$, then $m\angle 5 =$ _____.

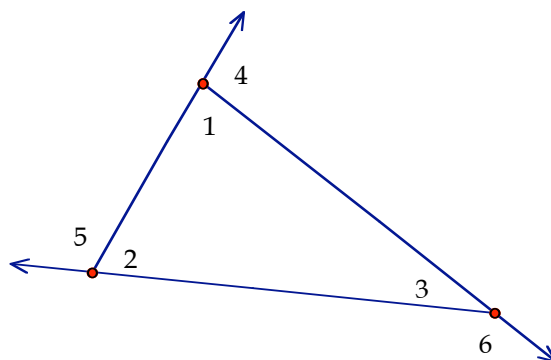
10. If $m\angle 2 = 61^\circ$ and $m\angle 3 = 21^\circ$, then $m\angle 4 =$ _____.

11. If $m\angle 1 = 80^\circ$ and $m\angle 2 = 73^\circ$, then $m\angle 6 =$ _____.

12. If $m\angle 4 = 103^\circ$ and $m\angle 3 = 18^\circ$, then $m\angle 2 =$ _____.

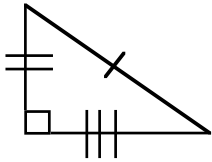
13. If $m\angle 5 = 99^\circ$ and $m\angle 3 = 32^\circ$, then $m\angle 1 =$ _____.

14. If $m\angle 2 = x + 10$, $m\angle 3 = x$ and $m\angle 4 = 100^\circ$, then $x =$ _____.

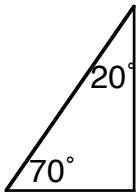


Describe each triangle.

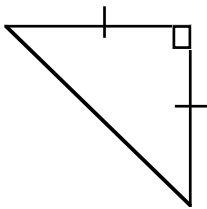
15. _____ triangle



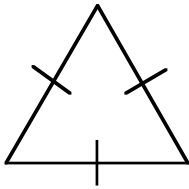
16. _____ triangle



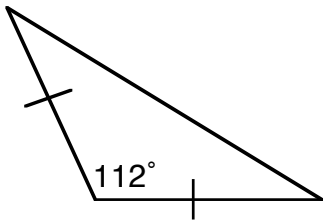
17. _____ triangle



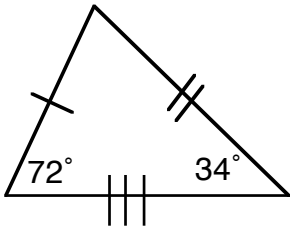
18. _____ triangle



19. _____ triangle



20. _____ triangle



21. In the figure to the right, polygon ABC is a triangle.
 \overline{CD} is an altitude. \overline{CE} is an angle bisector. \overline{CF} is a median.

a. Name two congruent angles, each of which has its vertex at C .

b. Name two line segments which are congruent.

c. Name two line segments which are perpendicular to each other.

d. Name two angles which are right angles.

