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

name _____
date _____
period ___

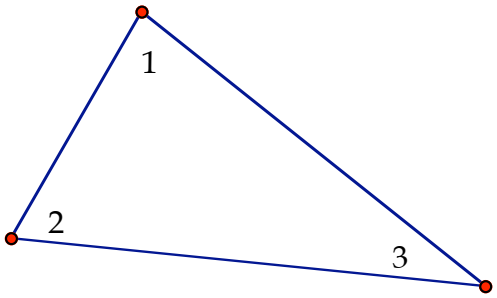
1. If $m\angle 1 = 28°$ and $m\angle 2 = 67°$, find $m\angle 3$. _____

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

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

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

5. If $m\angle 3 = 88°$ and $m\angle 2 = 47°$, 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<1 = _____, m<2 = _____, m<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<1 = _____, m<2 = _____, m<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<1 = _____, m<2 = _____, m<3 = __

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9. If m<1=72˚ and m<3=25˚, then m<5= _____.

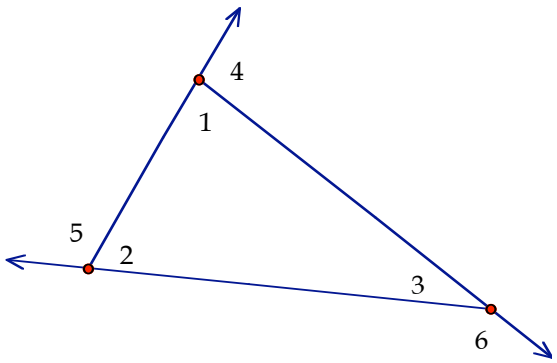
10. If m<2=61˚ and m<3=21˚, then m<4= _____.

11. If m<1=80˚ and m<2=73˚, then m<6= _____.

12. If m<4=103˚ and m<3=18˚, then m<2= _____.

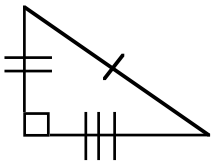
13. If m<5=99˚ and m<3=32˚, then m<1= _____.

14. If m<2= x+10 , m<3=x and m<4=100˚, then x = _____.

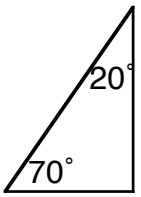


Describe each triangle.

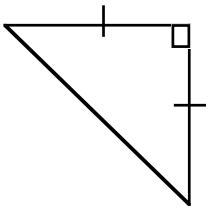
15. _____ _____ triangle



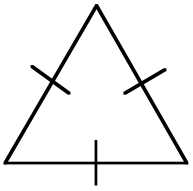
16. _____ _____ triangle



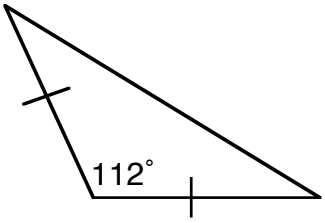
17. _____ _____ triangle



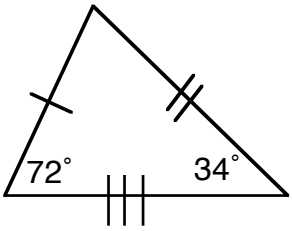
18. _____ _____ triangle



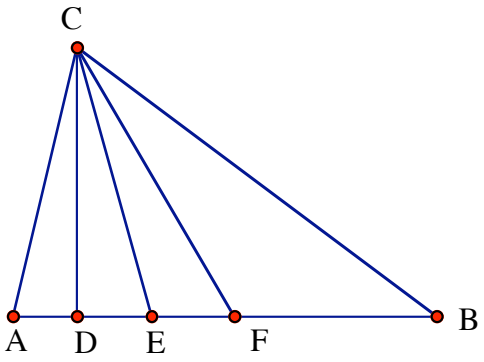
19. _____ _____ triangle



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.