

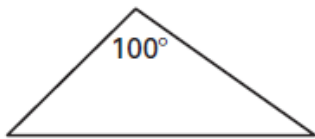
➤ Match the triangle description with the most specific name.

- | | |
|--|----------------|
| 1. Angles measures: 30° , 60° , 90° | A. Isosceles |
| 2. Side lengths: 2 cm, 2 cm, 2 cm | B. Scalene |
| 3. Angle measures: 60° , 60° , 60° | C. Right |
| 4. Side lengths: 6 m, 3 m, 6 m | D. Obtuse |
| 5. Side lengths: 5 ft, 7 ft, 9 ft | E. Equilateral |
| 6. Angle measures: 20° , 125° , 35° | F. Equiangular |

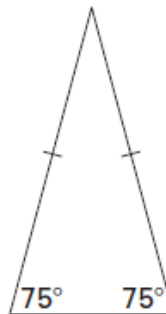
7. Can a right triangle also be obtuse? Explain why or why not.

8. Classify the triangle by its angles and by its sides.

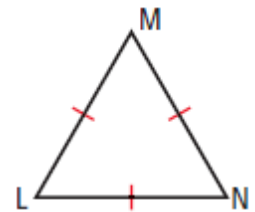
a)



b)

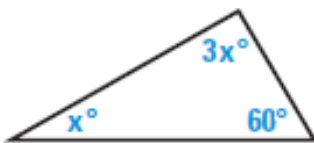


c)

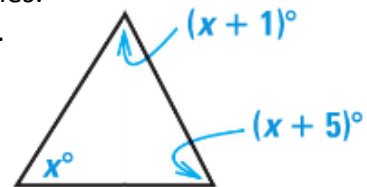


➤ Find the value of x . Then classify the triangle by its angles.

9.

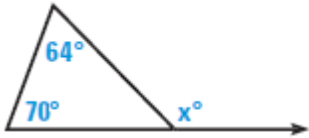


10.

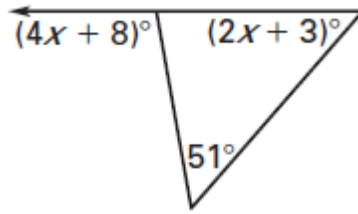


➤ Find the measure of the exterior angle shown.

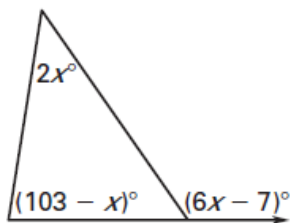
11.



12.

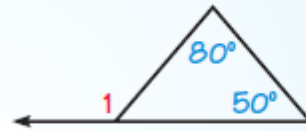


13.



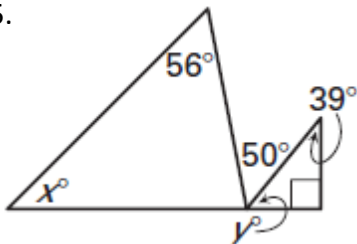
14. Describe and correct the error.

$$m\angle 1 + 80^\circ + 50^\circ = 180^\circ$$



➤ Find the values of x and y .

15.

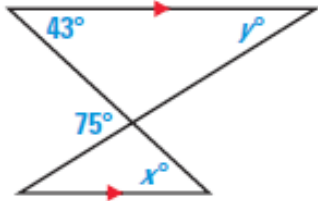


16. In $\triangle ABC$, $m\angle A = 42^\circ$. The measure of $\angle B$ is five times the measure of $\angle C$. Find $m\angle B$ and $m\angle C$.

17. In $\triangle ABC$, $m\angle A = m\angle B + 30^\circ$ and $m\angle C = m\angle B + 60^\circ$. Find the measure of each angle.

Challenge Problems!

18. Find the values of x and y .



19. In $\triangle EFG$, $m\angle F = 3(m\angle G)$, and $m\angle E = m\angle F - 30^\circ$. Find the measure of each angle.

Answer Key

1. C
2. E
3. F
4. A
5. B
6. D
7. No; in a right triangle the other two angles are complementary so they are both less than 90°
8. a) obtuse scalene b) acute isosceles c) equilateral equiangular
9. 30; right
10. 58; acute
11. 134
12. 100°
13. 125°
14. The measure of the exterior angle is equal to the sum of the measures of the two non-adjacent interior angles; $m\angle 1 = 80 + 50 = 130^\circ$
15. 45, 51
16. $m\angle B = 115^\circ$, $m\angle C = 23^\circ$
17. $m\angle A = 60^\circ$, $m\angle B = 30^\circ$, $m\angle C = 90^\circ$

Challenge Problems!

18. 43, 32
19. $m\angle E = 60^\circ$, $m\angle F = 90^\circ$, $m\angle G = 30^\circ$