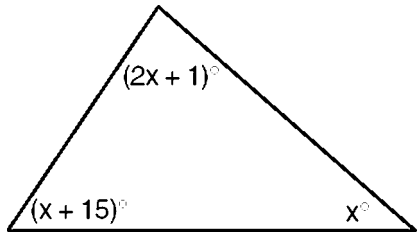


Unit 2 - Triangles

Name: _____

Date: _____

1. What is the measure of the largest angle in the accompanying triangle?



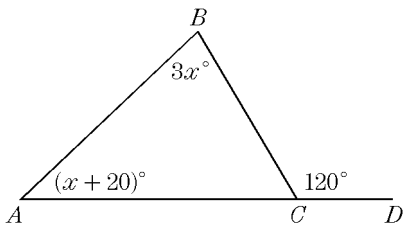
- A. 41 B. 46.5 C. 56 D. 83

2. In $\triangle ABC$, $m\angle A = x$, $m\angle B = 2x + 2$, and $m\angle C = 3x + 4$. What is the value of x ?

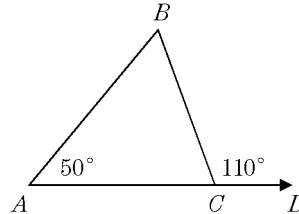
- A. 29 B. 31 C. 59 D. 61

3. The measures of the angles of a triangle are represented by $4x$, $x + 40$, and $2x$. Find the value of x .

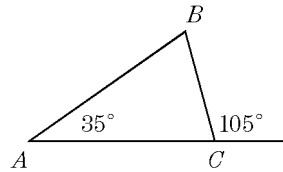
4. In the accompanying diagram, $m\angle A = x + 20$, $m\angle B = 3x$, $\angle BCD$ is an exterior angle formed by extending \overline{AC} to point D , and $m\angle BCD = 120$. Find the value of x .



5. In the accompanying diagram of $\triangle ABC$, the measure of exterior angle BCD is 110 and $m\angle BAC = 50$. Find $m\angle ABC$.

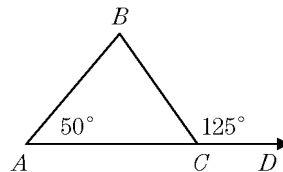


6. In the accompanying diagram of $\triangle ABC$, the measure of an exterior angle at C is 105 and $m\angle A = 35$. Find $m\angle B$.



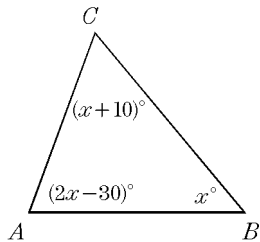
7. The measures of the angles of a triangle are represented by $(3x - 20)$, $(7x + 30)$, and $(2x + 50)$. Find x .

8. In the accompanying diagram of $\triangle ABC$, $m\angle BCD = 125$ and $m\angle BAC = 50$. Find, in degrees, $m\angle ABC$.



Unit 2 - Triangles

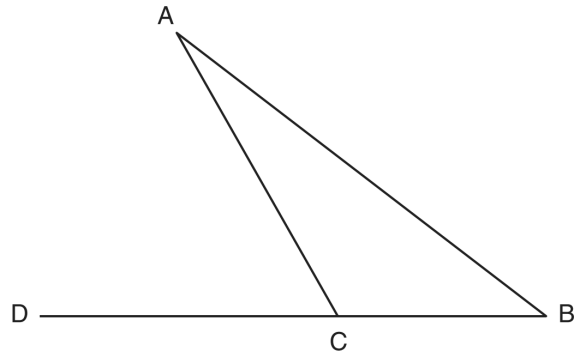
9. In the accompanying diagram, $m\angle A = 2x - 30$, $m\angle B = x$, and $m\angle C = x + 10$. Find the number of degrees in $\angle B$.



10. The number of degrees in the measures of the angles of a triangle are represented by x , $3x + 7$, and $4x + 5$. Find the value of x .

11. In $\triangle ABC$, $m\angle A = 80$ and $m\angle B = 50$. If $AB = 4x - 4$ and $AC = 2x + 16$, what is the value of x ?

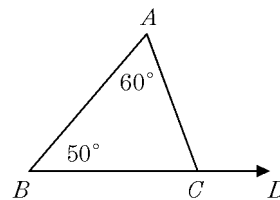
12. In the diagram below of $\triangle ABC$, side \overline{BC} is extended to point D, $m\angle A = x$, $m\angle B = 2x + 15$, and $m\angle ACD = 5x + 5$.



What is $m\angle B$?

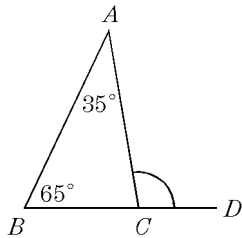
- A. 5 B. 20 C. 25 D. 55

13. In the accompanying diagram, $\angle ACD$ is an exterior angle of $\triangle ABC$. If $m\angle A = 60$ and $m\angle B = 50$, find $m\angle ACD$.

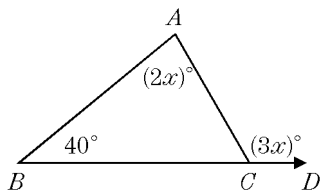


Unit 2 - Triangles

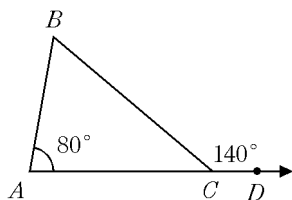
14. In the accompanying diagram, $\angle ACD$ is an exterior angle of $\triangle ABC$. If $m\angle A = 35$ and $m\angle B = 65$, find $m\angle ACD$.



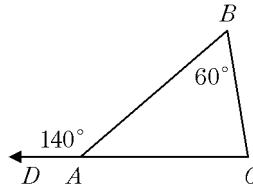
15. In the accompanying diagram, $\angle ACD$ is an exterior angle of $\triangle ABC$. If $m\angle B = 40$, $m\angle A = 2x$, and $m\angle ACD = 3x$. What is the value of x ?



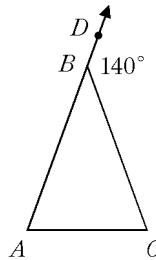
16. In the diagram shown, $m\angle BCD = 140$ and $m\angle BAC = 80$. Find $m\angle ABC$.



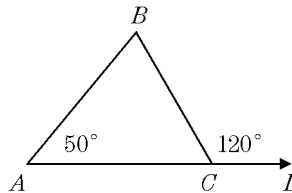
17. In the accompanying diagram, $\angle DAB$ is an exterior angle of $\triangle ABC$. If $m\angle DAB = 140$ and $m\angle B = 60$, find $m\angle C$.



18. In the accompanying diagram of isosceles triangle ABC , $\overline{AB} \cong \overline{CB}$, point D is on \overline{AB} , and $m\angle CBD = 140$. Find $m\angle A$.



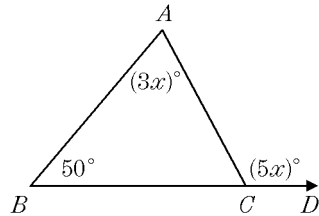
19. In the accompanying diagram of $\triangle ABC$, the measure of exterior angle BCD is 120° and $m\angle BAC = 50$. Find $m\angle ABC$.



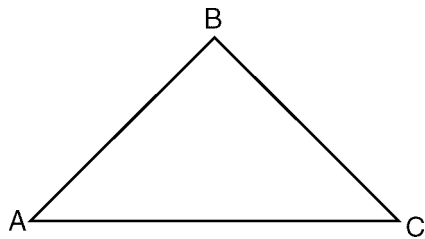
Unit 2 - Triangles

20. In the accompanying diagram, $\angle ACD$ is an exterior angle of $\triangle ABC$, $m\angle A = 3x$, $m\angle ACD = 5x$, and $m\angle B = 50$. What is the value of x ?

- A. 25
 B. 30
 C. 60
 D. 100



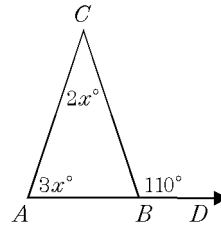
21. In the accompanying diagram of $\triangle ABC$, $AB = 4x - 3$, $BC = 2x + 7$, $AC = 5x - 1$, and the perimeter of $\triangle ABC$ is 58.



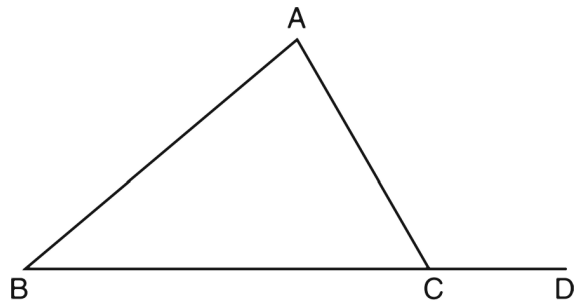
Which type of triangle is $\triangle ABC$?

- A. equilateral B. isosceles
 C. right D. scalene

22. In the accompanying diagram, the measure of exterior angle CBD is 110° . If the measures of the two nonadjacent interior angles are represented by $3x^\circ$ and $2x^\circ$, find the value of x .



23. In the diagram below of $\triangle ABC$, \overline{BC} is extended to D .



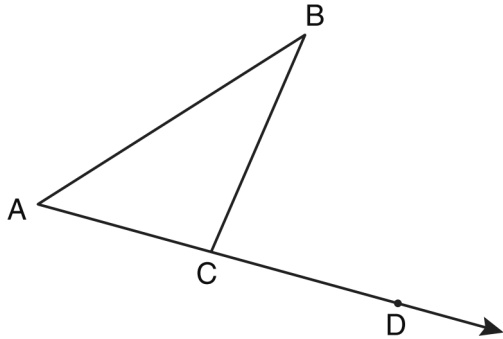
(Not drawn to scale)

If $m\angle A = x^2 - 6x$, $m\angle B = 2x - 3$, and $m\angle ACD = 9x + 27$, what is the value of x ?

- A. 10 B. 2 C. 3 D. 15

Unit 2 - Triangles

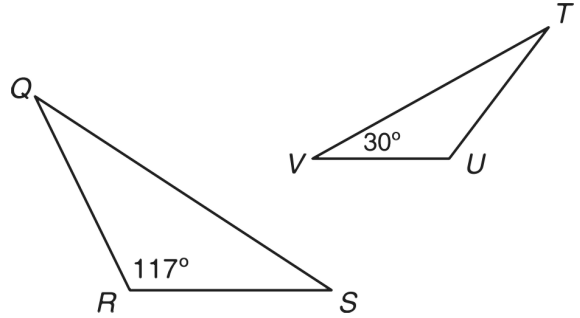
24. In the diagram below, $\triangle ABC$ is shown with \overline{AC} extended through point D .



If $m\angle BCD = 6x + 2$, $m\angle BAC = 3x + 15$, and $m\angle ABC = 2x - 1$, what is the value of x ?

- A. 12 B. $14\frac{10}{11}$ C. 16 D. $18\frac{1}{9}$

25. Triangle $QRS \sim$ triangle TUV .



What is the measure of $\angle Q$ and the measure of $\angle S$?

- A. $m\angle Q = 33^\circ$ and $m\angle S = 30^\circ$
B. $m\angle Q = 30^\circ$ and $m\angle S = 30^\circ$
C. $m\angle Q = 30^\circ$ and $m\angle S = 33^\circ$
D. $m\angle Q = 23^\circ$ and $m\angle S = 30^\circ$

Unit 2 - Triangles 01/22/2013

1.
Answer: D

2.
Answer: A

3.
Answer: 20

4.
Answer: 25

5.
Answer: 60

6.
Answer: 70

7.
Answer: 10

8.
Answer: 75

9.
Answer: 50

10.
Answer: 21

11.
Answer: 10

12.
Answer: C

13.
Answer: 110

14.
Answer: 100

15.
Answer: 40

16.
Answer: 60

17.
Answer: 80

18.
Answer: 70

19.
Answer: 70

20.
Answer: A

21.
Answer: B

22.
Answer: 22

23.
Answer: D

24.
Answer: A

25.
Answer: A