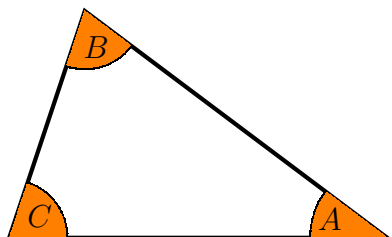


Angles & Triangles

Instruction:

- **Fact:** The sum of all three angles in any triangle is 180° .
- State your final answer correctly.

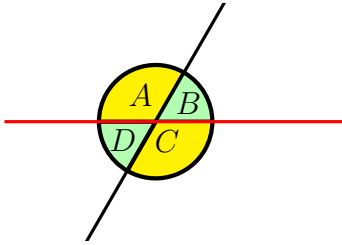


$$\angle A + \angle B + \angle C = 180^\circ$$

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1. The three angles in a triangle are equal. Find the measure of all three angles.
 2. Two angles in a triangle are equal. The third angle is 30° less than the measure of the equal angles. Find the measure of all three angles.
 3. Two angles in a triangle are equal. The third angle is 20° more than the sum of the equal angles. Find the measure of all three angles.
 4. One angle of a triangle is twice another angle. The third angle is 90° . Find the two missing angles.
 5. The measure of the three angles in a triangle are consecutive integers. Find the measure of all three angles.
 6. The measure of the three angles in a triangle are consecutive even integers. Find the measure of all three angles.
 7. In triangle ABC, angles A, and B have the same measure, while the measure of angle C is 60° greater than each of the other two angles. Find the measure of all three angles.
 8. In triangle ABC, the measure of angle A is twice the measure of angle B, while the measure of angle C is three times the measure of angle B. Find the measure of all three angles.
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Instruction:

- Fact: Vertical angles are equal.
- Fact: The sum of adjacent angles is 180° .
- State your final answer correctly.

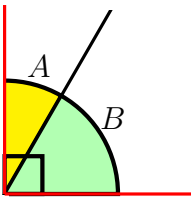


Angles **A** and **C** are vertical angles.
Angles **B** and **D** are vertical angles.
Angles **A** and **B** are adjacent angles.
Angles **B** and **C** are adjacent angles.
Angles **C** and **D** are adjacent angles.
Angles **D** and **A** are adjacent angles.

9. Two vertical angles are labeled as $(3x - 15)^\circ$ and $(2x + 25)^\circ$. Find the measure of both angles.
10. Two adjacent angles are labeled as $(3x - 15)^\circ$ and $(2x - 5)^\circ$. Find the measure of both angles.
11. Two vertical angles are labeled as $(7x)^\circ$ and $(2x + 45)^\circ$. Find the measure of both angles.
12. Two adjacent angles are labeled as $(5x - 12)^\circ$ and $(x + 6)^\circ$. Find the measure of both angles.

Instruction:

- Fact: The measure of a right angle is 90° .
- Fact: Two angles are called complementary angles when their sum is 90° .
- State your final answer correctly.



Angles **A** and **B** are complementary angles.

$$\angle A + \angle B = 90^\circ$$

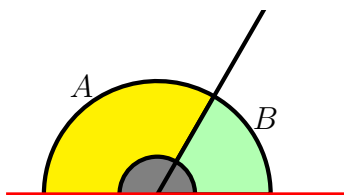
$$\angle A = 90^\circ - \angle B$$

$$\angle B = 90^\circ - \angle A$$

13. Two complementary angles are labeled as $(3x - 15)^\circ$ and $(2x + 25)^\circ$. Find the measure of both angles.
14. Find two complementary angles such that they both have the same measure.
15. Find two complementary angles such that the measure of one is four times the measure of the other one.
16. Find two complementary angles such that the measure of one is 30° less than twice the measure of the other one.

Instruction:

- **Fact:** The measure of a straight angle is 180° .
- **Fact:** Two angles are called supplementary angles when their sum is 180° .
- **State your final answer correctly.**



Angles **A** and **B** are supplementary angles.

$$\angle A + \angle B = 180^\circ$$

$$\angle B = 180^\circ - \angle A$$

$$\angle A = 180^\circ - \angle B$$

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17. Two supplementary angles are labeled as $(6x - 25)^\circ$ and $(3x + 25)^\circ$. Find the measure of both angles.
 18. Find two supplementary angles such that the measure of one of them is nine times the measure of the other one.
 19. Find two supplementary angles such that the measure of one of them is 40° less than the measure of the other one.
 20. Find two supplementary angles such that the measure of one of them is 50° more than four the measure of the other one.
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