Name: **Grade:** **Score:**

Worksheet #5

MeandMath

COMPLEMENTARY & SUPPLEMENTARY ANGLES

Learning goal: Students will be able to model and solve real-world and mathematical problems involving complementary and supplementary angles.

QUESTION	SOLUTION STEPS
Two angles are complementary. One is 15° less than twice the other. Find both.	
An angle's supplement is 4 times its complement. Find the angle.	
Three angles are in ratio 2:3:4. The sum of two smallest equals complement of the largest. Find all angles.	
The complement of an angle is 10° more than half its supplement. Find the angle.	
Two angles are supplementary. One is 60° more than the other. Find both	
An angle is one-fourth its supplement. Find the angle.	
An angle is 3 times its complement. Find the angle.	
Two angles are complementary. One is 5 times the other. Find both.	
Two angles are supplementary. One is 3 times the other. Find both.	
Three angles are in ratio 1:2:3 and add to 180°. Find them.	

Name: **Grade:** **Score:**

Worksheet #5(Answers)

MeandMath

COMPLEMENTARY & SUPPLEMENTARY ANGLES

Learning goal: Students will be able to model and solve real-world and mathematical problems involving complementary and supplementary angles.

QUESTION	SOLUTION STEPS
Two angles are complementary. One is 15° less than twice the other. Find both.	Let smaller angle = x Larger = 2x − 15 x + (2x − 15) = 90 3x − 15 = 90 3x = 105 x = 35 Angles: 35°, 55°
An angle's supplement is 4 times its complement. Find the angle.	Let angle = x 180 − x = 4(90 − x) 180 − x = 360 − 4x 3x = 180 x = 60 Angle: 60°
Three angles are in ratio 2:3:4. The sum of two smallest equals complement of the largest. Find all angles.	Let angles = 2x, 3x, 4x 2x + 3x = 90 − 4x 5x = 90 − 4x 9x = 90 x = 10 Angles: 20°, 30°, 40°
The complement of an angle is 10° more than half its supplement. Find the angle.	Let angle = x $90 - x = \frac{(180 - x)}{2} - 10$ $90 - x = 90 - \frac{x}{2} - 10$ $x - \frac{x}{2} = -10 \quad -\frac{x}{2} = -10$ x = 20 Angle: 20°
Two angles are supplementary. One is 60° more than the other. Find both	Let smaller angle = x Larger = x + 60 x + x + 60 = 180 → 2x = 120 → x = 60 Angles: 60°, 120°

An angle is one-fourth its supplement. Find the angle.	Let angle = x $x = \frac{1}{4}(180 - x)$ 4x = 180 - x 5x = 180 x = 36 Angle: 36°
An angle is 3 times its complement. Find the angle.	Let angle = x x = 3(90 - x) x = 270 - 3x 4x = 270 x = 60 Angle: 60°
Two angles are complementary. One is 5 times the other. Find both.	Let angle = x Other = 5x x + 5x = 90 6x = 90 x = 15 Angles: 15°, 75°
Two angles are supplementary. One is 3 times the other. Find both.	Let angle = x Other = 3x x + 3x = 180 4x = 180 x = 45 Angles: 45°, 135°
Three angles are in ratio 1:2:3 and add to 180°. Find them.	Let angles = x, 2x, 3x x + 2x + 3x = 180 6x = 180 x = 30 Angles: 30°, 60°, 90°