Worksheet #3

COMPLEMENTARY ANGLES

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

QUESTION	SOLUTION STEPS
Two complementary angles differ by 16°. Find both angles.	
An angle is 24° less than its complement. Find the angle.	
One angle is twice its complement. Find the angle.	
The complement of an angle is 15° more than half the angle. Find the angle.	
Two complementary angles are in ratio 2:3. Find both angles.	
An angle is 10° more than one-third of its complement. Find the angle.	
Two complementary angles differ by 36°. Find both angles.	
The complement of an angle is 5 times the angle. Find the angle.	
Two complementary angles are in ratio 4:5. Find both angles.	
An angle's complement is 6° less than three times the angle. Find the angle.	

Worksheet #3(Answers)

COMPLEMENTARY ANGLES

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

QUESTION	SOLUTION STEPS
Two complementary angles differ by 16°. Find both angles.	Let smaller angle = x Larger angle = x + 16° x + (x + 16°) = 90° 2x = 74° x = 37° Larger angle = 37° + 16° = 53°
An angle is 24° less than its complement. Find the angle.	Let angle = x Complement = 90° – x x = (90° – x) – 24° 2x = 66° x = 33°
One angle is twice its complement. Find the angle.	Let angle = x Complement = 90° – x x = 2(90° – x) 3x = 180° x = 60°
The complement of an angle is 15° more than half the angle. Find the angle.	Let angle = x Complement = 90° – x 90° – x = 0.5x + 15° 1.5x = 75° x = 50°
Two complementary angles are in ratio 2:3. Find both angles.	Let angles = 2x & 3x 2x + 3x = 90° 5x = 90° x = 18° Angles = 36° & 54°
An angle is 10° more than one-third of its complement. Find the angle.	Let angle = x Complement = 90° – x x = ⅓(90° – x) + 10° 3x = 90° – x + 30° 4x = 120° x = 30°

Two complementary angles differ by 36°. Find both angles.	Let smaller angle = x Larger angle = x + 36° x + (x + 36°) = 90° 2x = 54° → x = 27° Larger angle = 63°
The complement of an angle is 5 times the angle. Find the angle.	Let angle = x Complement = 90° – x3. 90° – x = 5x 6x = 90° x = 15°
Two complementary angles are in ratio 4:5. Find both angles.	Let angles = 4x & 5x 4x + 5x = 90° 9x = 90° → x = 10° Angles = 40° & 50°
An angle's complement is 6° less than three times the angle. Find the angle.	Let angle = x Complement = 90° – x 90° – x = 3x – 6° 4x = 96° 4x = 96° x = 24°