

Name _____

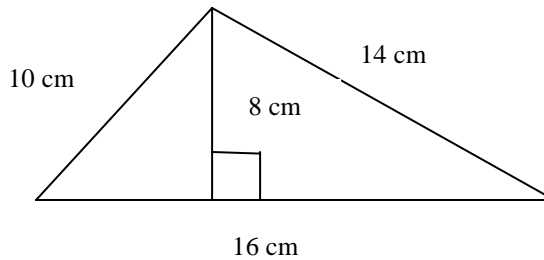
Date _____

Additional Exercises 3.3
Form II
Problem Solving in Geometry

Use the formulas for perimeter, area, circumference and volume to solve the problems.

1. Find the a) perimeter and b) area of a rectangle that is 12 inches long and $6\frac{1}{2}$ inches wide. 1a. _____
b. _____

2. Find the a) perimeter and b) area of the triangle. 2a. _____
b. _____



3. Find the area of a trapezoid with bases measuring 20 inches and 17 inches, and a height of 16 inches. 3. _____

For exercises 4 – 9, express answers in terms of π . Then give the answer rounded to the nearest whole number.

4. Find the area of a circle with a diameter of 14 inches. 4. _____

5. Find the area of a circle with a radius of 4.5 centimeters. 5. _____

6. Find the circumference of a circle with a radius of 2.4 feet. 6. _____

7. Find the volume of a cone with a radius of 2 centimeters and a height of 12 centimeters. 7. _____

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8. Find the volume of a cylindrical trash can that has a diameter of 24 inches and a height of 32 inches. 8. _____

9. Find the volume of a sphere with a diameter of 3 decimeters. 9. _____

Solve the problem.

10. The circumference of a circle is 6π meters. Find the circle's radius. 10. _____

11. Two angles are complementary. One angle is 22° larger than the other angle. Find the measure of each angle. 11. _____

12. A rectangle has a perimeter of 33 feet. The length is twice the width. Find the dimensions of the rectangle. 12. _____

13. Find the volume of a rectangular trash container that measures 8 feet by 5 feet by 6 feet. 13. _____

14. The angles of a triangle measure $2x$ degrees, $4x + 7$ degrees and $3x + 2$ degrees. Find the measure of each angle. 14. _____

15. One angle of a triangle is 5 degrees larger than the smallest angle. The third angle is 6 degrees less than 3 times the smallest angle. 15. _____

16. A rectangular piece of carpet has a perimeter of 218 inches. The length of the carpet is 75 inches more than the width. Find the dimensions of the carpet. 16. _____

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9. Find the area of a round trampoline mat if the diameter of the whole trampoline including the frame is 8 feet and the mat is 10 inches in from the frame. (Give your answer in inches.) 9. _____

Solve the problem.

10. The circumference of a circle is 28π meters. Find the circle's radius. 10. _____

11. The volume of a circular cylinder is 128π cubic inches. Find the height of the cylinder if the radius is 4 inches. 11. _____

12. Find the volume of a packing crate that measures 6.2 feet by 3.2 feet by 2 feet. 12. _____

13. Two angles are supplementary. One angle is 15° less than twice the other angle. Find the measure of each angle. 13. _____

14. One of the base angles of an isosceles triangle is 39° . Find the measures of the other two angles. 14. _____

15. One angle of a triangle is two times as large as another. The measure of the third angle is 98° greater than that of the smallest angle. Find the measure of each angle. 15. _____

16. The rooms of a house have the following measurements: 16. _____
- | | |
|-------------|----------------------|
| kitchen | $12.5' \times 15.5'$ |
| living area | $20' \times 18'$ |
| bedroom | $10' \times 10.8'$ |
| bedroom | $9' \times 12'$ |
| bedroom | $11' \times 14'$ |
| bathroom | $8.5' \times 6.5'$ |

Find the total area of the house.