*Surface Area and Working Backwards- ACC Warm Up*

Directions: complete the following review questions.

1. The surface area of a cone is 261 km2. The cone has a diameter of 18 km. Find the slant height of the cone.

2. The surface area of the trapezoidal prism is 768 mi2. Find the missing length below.



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3. The bottomless tent illustrated below is in the shape of a right triangular prism and is made of nylon. How many square feet of nylon is required for the front, rear, and $2$ sides of the tent? (Note: Please ignore the extra nylon for seams.)

4. Find the radius of the base of a right cylinder if SA=528ft2 and height is 10ft. (Factor)

5. Find the surface area of this hemisphere as an exact value and to the nearest tenth.



6. Find the surface area of the Right Triangular Prism below.



7. The surface area of a sphere is 64 square centimeters. Find the radius.

8. The surface area of a right cylinder is 200 square centimeters and the radius is 4 centimeters. Find the height of the cylinder.

9. The lateral area of a cube is 36 square inches. How long is each edge?

10. The radius of a right circular cone is 6 inches and the height is 8 inches. Find the slant height of the cone.

11. The lateral area of a square pyramid is 300 square units. The perimeter of its base is 100 units. Find the slant height of the pyramid.

12. The area of each face of a cube is 60 square centimeters. Find the surface area of the cube.

13. Find the surface area.



14. Find the exact surface area.

15. Find the exact amount of canvas required for the sides, floor, doors and window of the tent in the shape of a triangular prism as shown in the figure. The base of the prism is an equilateral triangle.



**Solutions:** 1. 20km 2. 7mi 3. 94ft2 4. 12ft 5. 75$π$cm2 or 235.6cm2 6. 240in2 7. 4cm 8. 21cm 9. 3in 10. 10in 11. 6u 12. 360cm2 13. 624cm2 14. $(5625π+5625\sqrt{2}π)$m2 15. $(890520+65522\sqrt{3})$m2