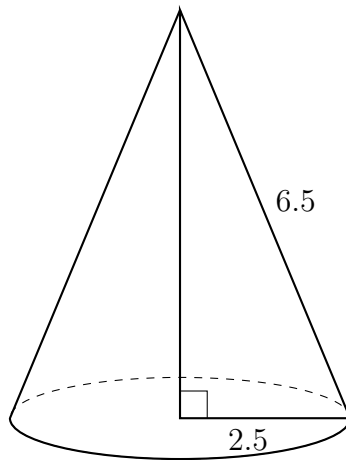


Name:

8.6 Quiz: Triangle angles, transversals, segments, solids

1. Find the volume of a rectangular prism with length 5 cm, width 10 cm, and height 8 cm.
2. Find the volume of a pyramid ($V = \frac{1}{3}Bh$) having a height of 13 inches and with a square base having side lengths of 6 inches. Express your result to the *nearest cubic inch*.
3. Find the volume of a sphere with a radius of 3 inches, to the *nearest whole cubic inch*.
(The formula for the volume of a *sphere* is $V = \frac{4}{3}\pi r^3$)
4. A child's tent can be modeled as a pyramid with a square base whose sides measure 60 inches and whose height measures 84 inches. What is the volume of the tent, to the *nearest cubic foot*?

5. Randy's basketball is in the shape of a sphere with a maximum circumference of 29.5 inches. Determine and state the volume of the basketball, to the *nearest cubic inch*.
6. The base of a pyramid is a rectangle with a width of 4.6 cm and a length of 9 cm. What is the height, in centimeters, of the pyramid if its volume is 82.8 cm^3 ?
7. As shown in the diagram below, the radius of a cone is 2.5 cm and its slant height is 6.5 cm.



How many cubic centimeters are in the volume of the cone? Express your answer in terms of π .

Name:

8. Lou has a solid clay brick in the shape of a rectangular prism with a length of 8 inches, a width of 3.5 inches, and a height of 2.25 inches. If the clay weighs 1.055 oz/in^3 , how much does Lou's brick weigh, to the nearest ounce?
9. A rectangular tabletop will be made of maple wood that weighs 43 pounds per cubic foot. The tabletop will have a length of eight feet, a width of three feet, and a thickness of one inch. Determine and state the weight of the tabletop, in pounds.
10. A cone has a volume of 108π and a base diameter of 12. What is the height of the cone?

3-D rotation

11. If a right triangle is continuously rotated around one of its legs (not the hypotenuse), what is the three-dimensional figure formed?
- | | |
|------------|-----------------------|
| (a) cone | (c) cylinder |
| (b) sphere | (d) rectangular prism |