

Name EOC Review Answer Key Period _____ Date _____

Part A

Identify each statement as true or false.

- F 1. If $\angle A$ is an acute angle in a right triangle, then $\cos A = \frac{\text{length of leg opposite } \angle A}{\text{length of hypotenuse}}$
- F 2. Given two side lengths and one angle measure of a triangle, you can always use the Law of Sines to find the measure of another angle.
- T 3. If a cone and a cylinder have the same radius and the same height, then the volume of the cone is $\frac{1}{3}$ the volume of the cylinder.
- F 4. If the edge lengths of two similar prisms are in the ratio $\frac{p}{q}$, then the surface areas of the prisms are in the ratio $\frac{p^2}{q^2}$.
- T 5. Any two squares are similar.
- F 6. The formula for the surface area of a sphere with radius r is $S = \frac{4}{3}\pi r^2$.
- T 7. If two angles of one triangle are congruent to two angles of another triangle, then the triangles are similar.
- F 8. A cube is an octahedron.

Part B

Complete each statement.

- 1. Two polygons are similar if and only if corresponding angles are congruent and the corresponding sides are proportional.
- 2. If two sides of a triangle measure 14 cm and 10 cm, and the angle between the sides measures 30° , then the area of the triangle is 35 cm^2 .
- 3. If a cylinder has height 4 cm and base diameter x cm, then its volume is $\pi x^2 \text{ cm}^3$.
- 4. If a line cuts two sides of a triangle proportionally, then it is parallel to the third side.
- 5. The density of a substance is calculated by dividing its mass by its volume.
- 6. If the surface areas of two similar cylinders are in the ratio $\frac{64}{81}$, then the volumes are in the ratio $\frac{512}{729}$.
- 7. If $\cos B = \frac{4}{5}$ and $\sin B = \frac{3}{5}$, then $\tan B = \frac{3}{4}$.
- 8. If the rule $(x, y) \rightarrow (3x, 3y)$ is applied to a triangle with area 6 cm^2 , then the area of the image triangle is 54 cm^2 .

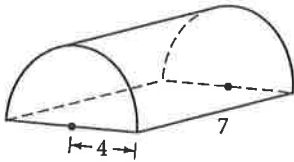
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Name _____ Period _____ Date _____

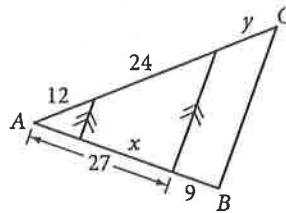
Part C

Find each measure to the nearest tenth of a unit. All lengths are in centimeters.

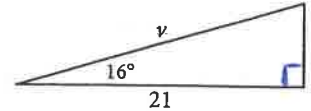
1. Volume \approx 175.9 cm³



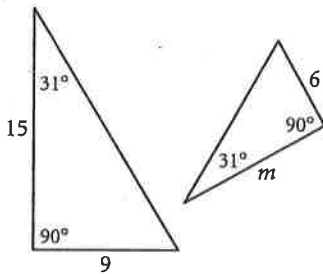
2. $x =$ 18 cm
 $y =$ 12 cm



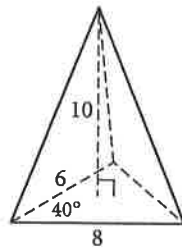
3. $v \approx$ 21.8 cm



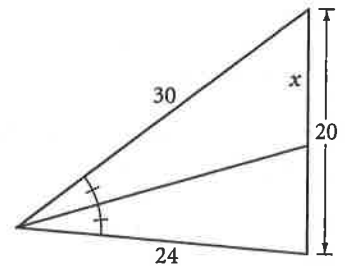
4. $m =$ 10 cm



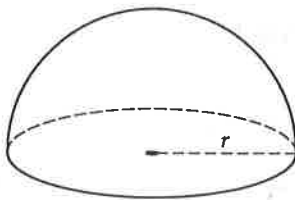
5. Volume \approx 51.4 cm³



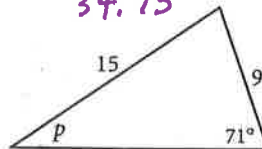
6. $x \approx$ 11.1 cm



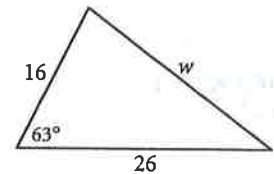
7. Volume = 18π cm³
 $r =$ 3 cm



8. $p \approx$ 34.6°
34.75°



9. $w \approx$ 23.5 cm



Part D

1. A chunk of copper with mass 538.2 g is dropped into a container, causing the water level to rise 2 cm. The container is a rectangular prism with base 6 cm by 5 cm. What is the density of copper?
2. A yardstick casts a shadow 2 ft 3 in. long at the same time a tree casts a shadow 63 ft long. How tall is the tree, to the nearest foot?
3. The angle of elevation from a ship to the top of a 35 m lighthouse at the water's edge measures 28°. To the nearest meter, how far is the ship from the shore?

8.97 g/cm³

84 ft.

66 m

