

Geometry
Review for the 2nd Semester Final Exam 2014

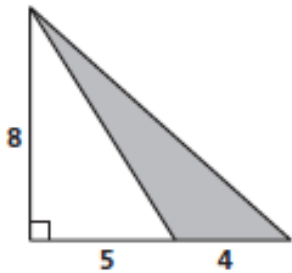
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Chapter 7:

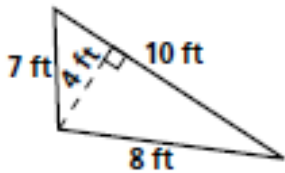
1) Find the area of each triangle, given the base b and the height h .

$b = 4, h = 4$

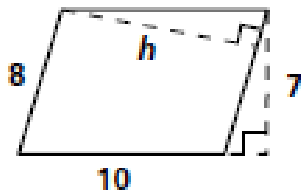
2) Find the area of the shaded region.



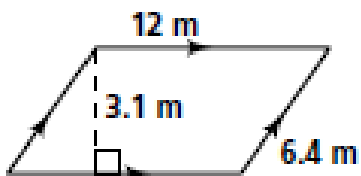
3) Find the area.



4) Find the value of h in the parallelogram below.



5) Find the area.

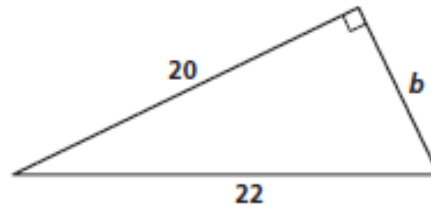


6) Find the missing measure.

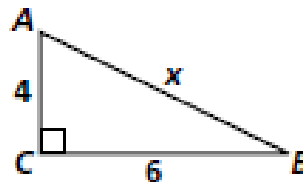
parallelogram $TQMN$

$A = 183 \text{ in.}^2, b = ?, h = 3 \text{ in.}$

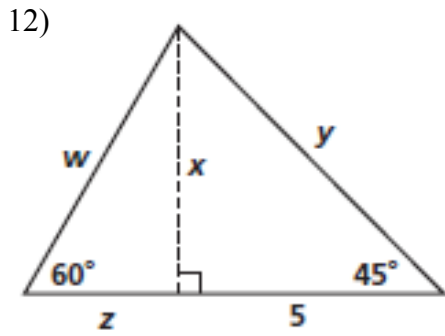
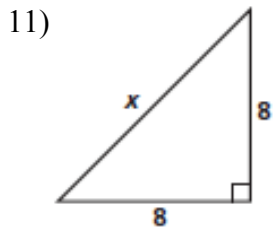
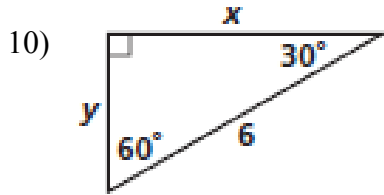
7) Find the value of the variable. Leave your answers in simplest radical form.



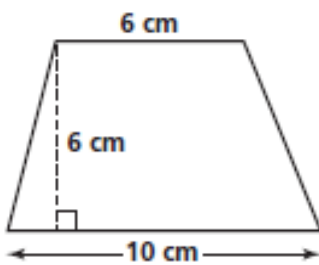
8) Find the value of the variable. Leave your answers in simplest radical form.



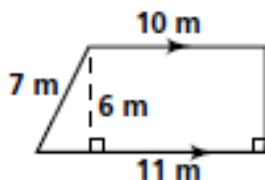
Find the value of each variable. Leave your answers in simplest radical form.



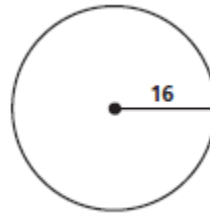
13) Find the area.



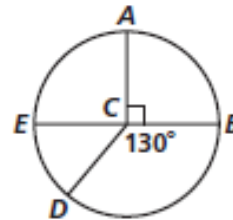
14) Find the area.



15) Find (a) the circumference and (b) the area of the circle. Leave your answers in terms of π .



In circle C below, \overline{EB} is a diameter, and \overline{AC} and \overline{DC} are radii. Identify the following:



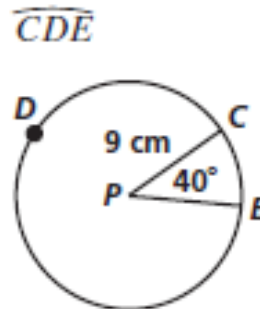
16) a major arc and its measure

17) a minor arc and its measure

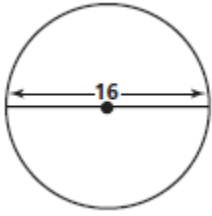
18) an acute central angle and its measure

19) an obtuse central angle and its measure

20) Find the length of the indicated arc. Leave your answer in terms of π .



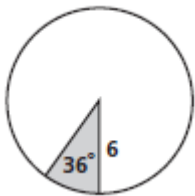
21) Find (a) the circumference and (b) the area of the circle. Use $\pi = 3.14$.



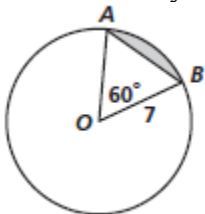
22) Find the radius of a circle whose area is 36π ft.

23) Find the radius of a circle whose circumference is 50π cm.

24) Find the area of each shaded sector of a circle. Leave your answer in terms of π .



25) Find the area of each shaded segment of a circle. Round your answers to the nearest tenth.



Chapter 8:

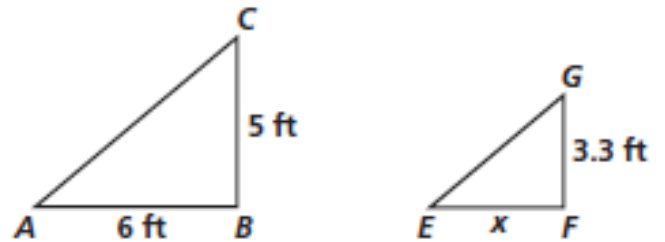
Solve each proportion for x.

26) $\frac{x}{4} = \frac{9}{3}$

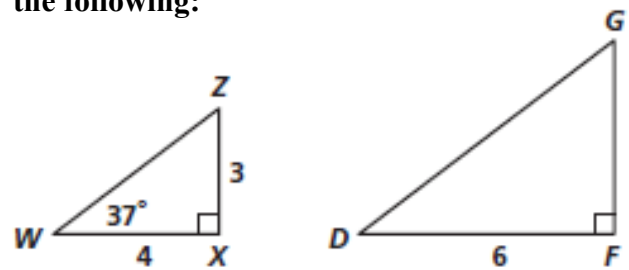
27) $\frac{6x}{8} = \frac{x-5}{2}$

28) $\frac{x}{x+2} = \frac{3}{4}$

29) The triangles below are similar. Find x.



$\triangle WXZ \sim \triangle DFG$. Use the diagram below to find the following:

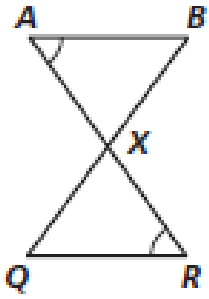


30) \overline{GF}

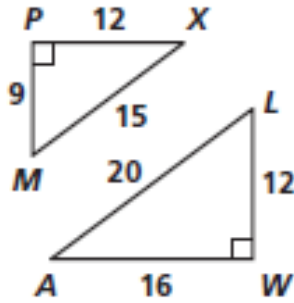
31) $m\angle G$

Explain why the triangles are similar. Write a similarity statement for each pair:

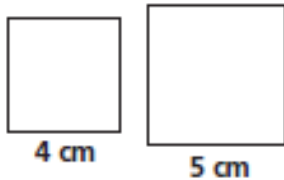
32)



33)

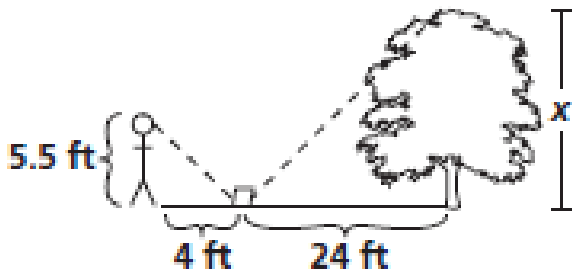


34) For each pair of similar figures, find (a) the ratio of the perimeters and (b) the ratio of the areas.



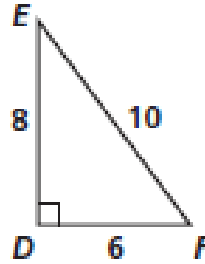
35) The area of a triangle is 50 in^2 . What is the area of a triangle with sides 3 times as long?

36) Natasha places a mirror on the ground 24 ft from the base of an oak tree. She walks backwards until she can see the top of the tree in the middle of the mirror. At that point, Natasha's eyes are 5.5 ft above the ground, and her feet are 4 ft from the image in the mirror. Find the height of the oak tree.



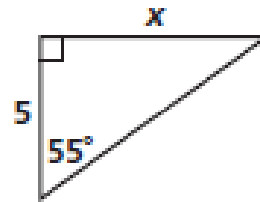
Chapter 9:

37) Write the sine, cosine, and tangent ratios for $\angle E$.

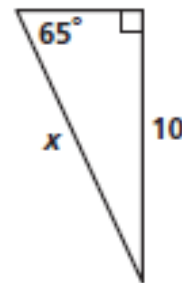


Find the value of x . Round your answers to the nearest tenth.

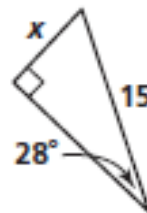
38)



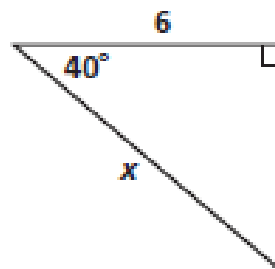
39)



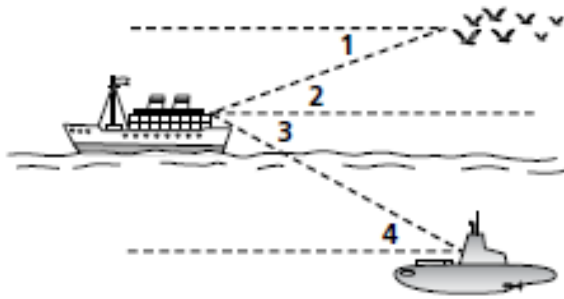
40)



41)



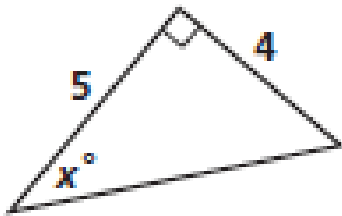
42) Describe each angle as it relates to the diagram.



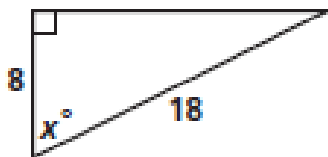
- a) $\angle 1$ b) $\angle 2$

Find the value of x . Round your answers to the nearest degree.

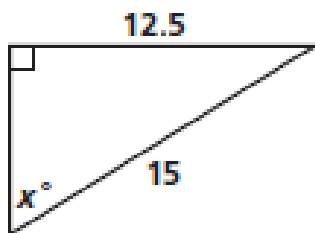
43)



44)

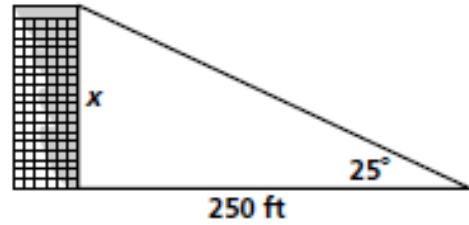


45)

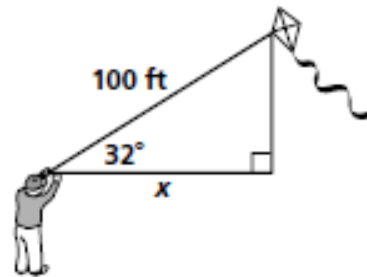


Find the value of x . Round to the nearest tenth.

46)



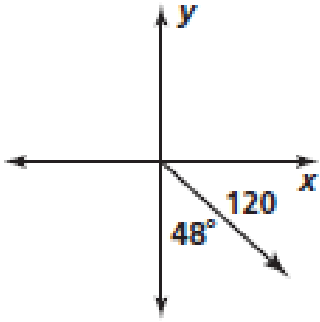
47)



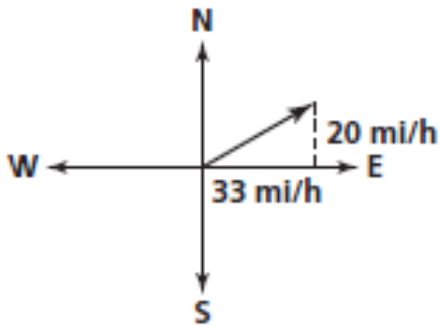
48) The angle of elevation to a building in the distance is 22° . You know that the building is approximately 450 ft tall. Estimate the distance to the base of the building.

49) An airplane is flying at an altitude of 10,000 ft. The airport at which it is scheduled to land is 50 mi away. Find the angle at which the airplane must descend for landing. (Hint: There are 5280 ft in 1 mi.)

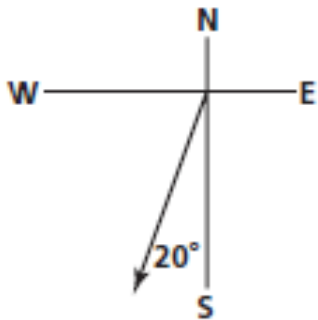
50) Describe the vector as an ordered pair. Give the coordinates to the nearest tenth.



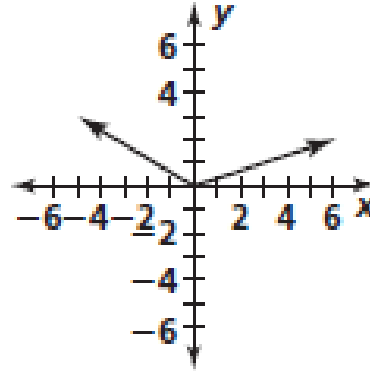
51) Find the magnitude and direction of the vector. Round your answers to the nearest tenth.



52) Use compass directions to describe the direction of the vector.



53) Write the resultant as an ordered pair, and draw the resultant vector.



Find the area of each polygon. Round your answers to the nearest tenth.

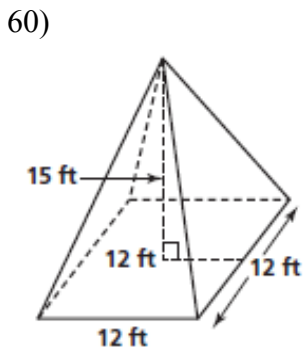
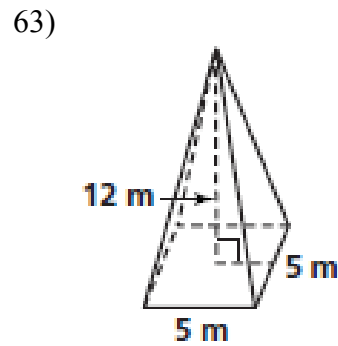
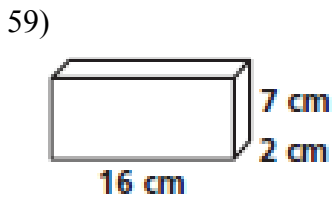
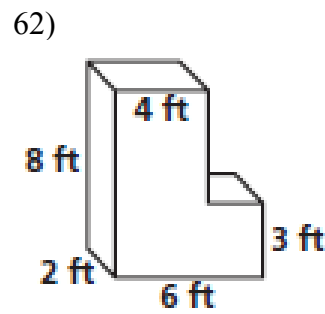
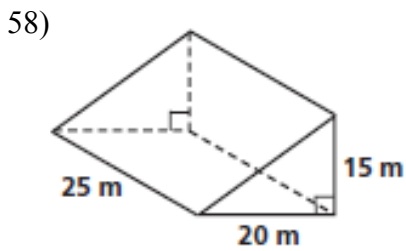
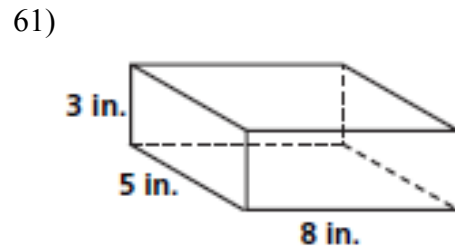
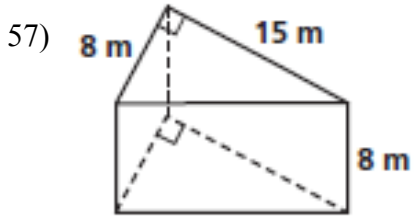
54) A regular hexagon with side length 12 cm.

55) A regular octagon with apothem equal to 8 m.

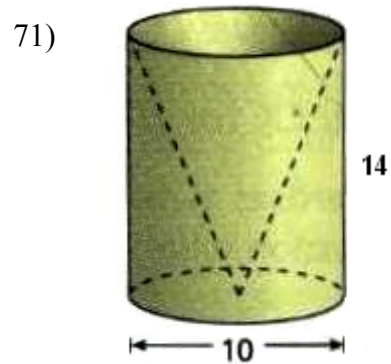
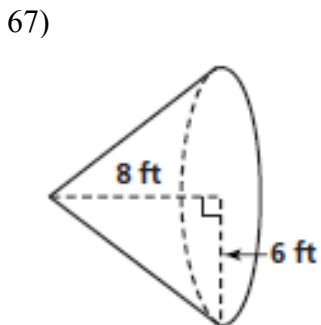
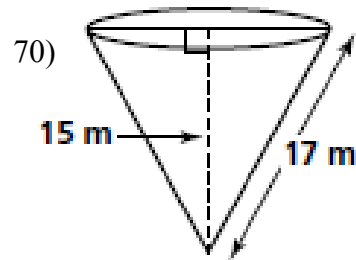
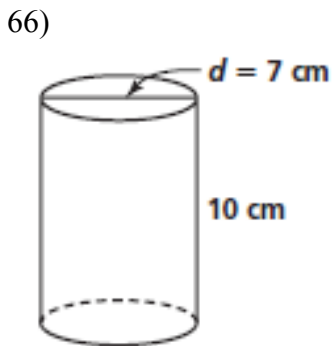
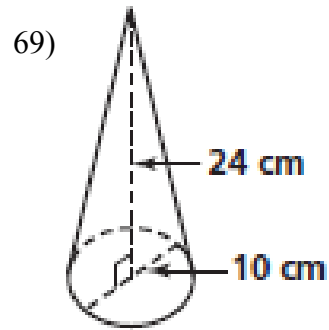
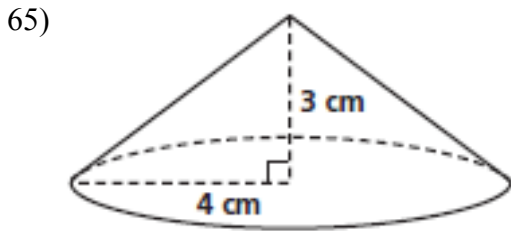
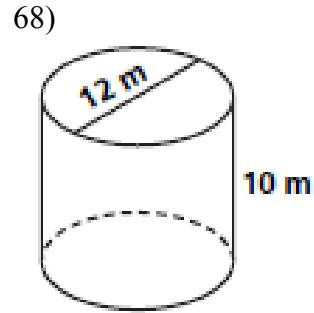
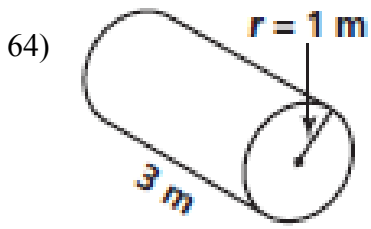
56) A regular pentagon with radius of 11 ft.

Chapter 10:

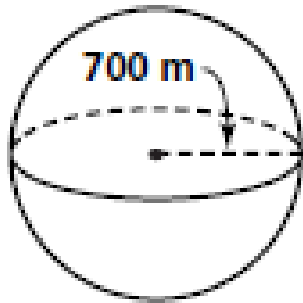
Find (a) the surface area and (b) the volume of each figure. Round your answers to the nearest tenth.



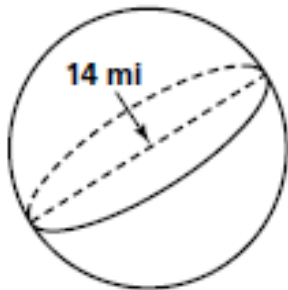
Find (a) the surface area and (b) the volume of each figure. Leave your answer in terms of π .



72) Find (a) the surface area and (b) the volume of the sphere. Leave your answer in terms of π .



73) Find (a) the surface area and (b) the volume of the sphere. Leave your answer in terms of π .



74) Find the volume of the sphere. Round your answer to the nearest tenth.



S.A. = 45,240 yd²

75) The similarity ratio of two similar prisms is 2:5.

- a) What is the ratio of their surface areas?
- b) What is the ratio of their volumes?

76) The ratio of the radii of two spheres is 3:7.

- a) What is the ratio of their surface areas?
- b) What is the ratio of their volumes?

77) The surface area of two similar pyramids are 25 ft² and 36 ft².

- a) What is the similarity ratio?
- b) What is the ratio of their volumes?