### Solve each proportion by using cross products.

5. 
$$\frac{9}{28} = \frac{x}{84}$$

**6.** 
$$\frac{3}{18} = \frac{4x}{7}$$

7. 
$$\frac{x+5}{7} = \frac{x+3}{5}$$

### Use a proportion to solve each problem.

- 8. If two cassettes cost \$14.50, how much will 15 cassettes cost?
- **9.** If a 6-foot post casts a shadow that is 8 feet long, how tall is an antenna that casts a 60-foot shadow at the same time?

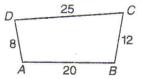
## 7-2

If quadrilateral ABCD is similar to quadrilateral EFGH, find each of the following.

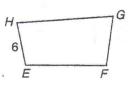
1. scale factor of ABCD to EFGH





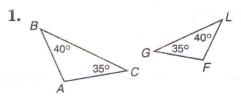


4. GH

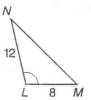


Determine whether each pair of triangles is similar. Give a reason for your answer.

7-3

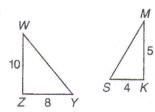


2.

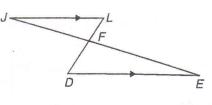


9 T 6 S

3.

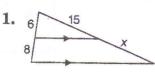


4.

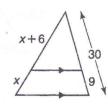


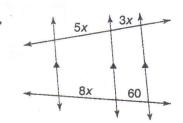
### Find the value of x.

7-4



2.

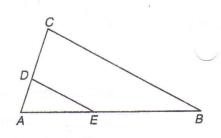




### In $\triangle$ ABC, find x so that $\overline{DE} \parallel \overline{CB}$ .

**4.** 
$$DC = 18, AD = 6,$$
  $AE = 12, EB = x - 3$ 

5. 
$$AC = 30, AD = 10,$$
  
 $AE = 22, EB = x + 4$ 



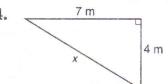
#### Find the geometric mean between each pair of numbers.

1. 3 and 10

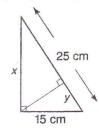
2. 10 and 20

### Find the values of x and y. Round to the nearest tenth.

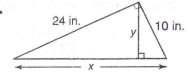
8-1



5.



6.



# Determine if the given measures are measures of the sides of a right triangle.

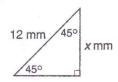


**7.** 18, 24, 30

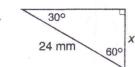
8. 20, 30, 40

### Find the value of x.

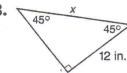
1.



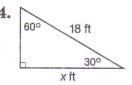
2.



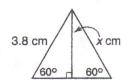
9

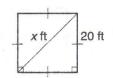


8-3



5.





## GEOMETRY CP SPRING REVIEW

Find the indicated trigonometric ratio as a fraction and as a decimal rounded to the nearest ten-thousandth.

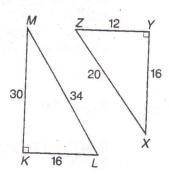
8-4

1.  $\sin M$ 

 $2. \cos Z$ 

3. tan *L* 

4.  $\sin X$ 



Find the value of each ratio to the nearest ten-thousandth.

7. sin 12°

8. cos 32°

8-5

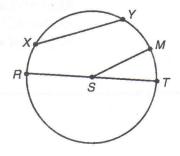
Solve each problem. Round measures of segments to the nearest hundredth and measures of angles to the nearest degree.

- 1. From the top of a tower, the angle of depression to a stake on the ground is 72°. The top of the tower is 80 feet above ground. How far is the stake from the foot of the tower?
- 2. A tree 40 feet high casts a shadow 58 feet long. Find the measure of the angle of elevation of the sun.

10-1

#### Refer to OS for Exercises 1-6.

- 1. Name the center of  $\bigcirc S$ .
- 2. Name three radii of  $\bigcirc S$ .
- 3. Name a diameter.
- 4. Name a chord.
- **5.** If RT = 8.2, find SM.
- **6.** Is  $\overline{SR} \cong \overline{SM}$ ? Explain.



In Exercises 7–10, the radius, diameter, or circumference of a circle is given. Find the other measures to the nearest tenth.

7. 
$$r = 7, d = \frac{?}{}, C = \frac{?}{}$$

8. 
$$d = 32.4, r = ?, C = ?$$

**9.** 
$$C = 116.5, d = \frac{?}{}, r = \frac{?}{}$$



Refer to  $\bigcirc P$  for Exercises 1–8. If  $\overline{SN}$  and  $\overline{MT}$  are diameters with  $m \angle SPT = 51$  and  $m \angle NPR = 29$ , determine whether each arc is a minor arc, a major arc, or a semicircle. Then find the degree measure of each arc.

1.  $m\widehat{NR}$ 

2.  $m\widehat{ST}$ 

10-2

10-3

3.  $m\widehat{TSR}$ 

4. mMST

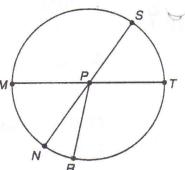
If MT = 15, find the length of each arc. Round to the nearest tenth.

5.  $\widehat{NR}$ 

6.  $\widehat{ST}$ 

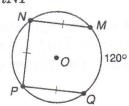
7. TSR

8. MST

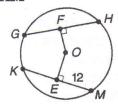


In each circle, O is the center. Find each measure.

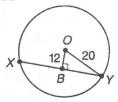
1.  $m\widehat{NP}$ 



2. KM

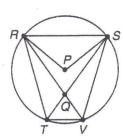


3. XY



- 4. Suppose a chord is 20 inches long and is 24 inches from the center of the circle. Find the length of the radius.
- Suppose a chord of a circle is 5 inches from the center and is 24 inches long.
   Find the length of the radius.

10-4



In  $\bigcirc P$ ,  $m\widehat{SV} = 86$  and  $m \angle RPS = 110$ . Find each measure.

- 4.  $m \angle PRS$
- 5.  $m\widehat{RT}$

- **6.**  $m \angle RVT$
- 7.  $m \angle SVT$

- 8.  $m \angle TQV$
- 9.  $m \angle RQT$
- 10.  $m \angle QRT$
- 11.  $m\widehat{RS}$

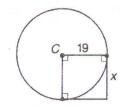


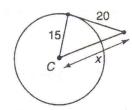
# GEOM CP SPRING REVIEW

### DO NOT WRITE ON SHEET

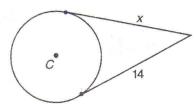
For each  $\odot$ C, find the value of x. Assume that segments that appear to be tangent are tangent.

1.

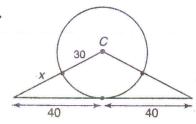




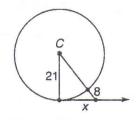
3.

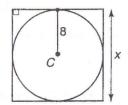


4.



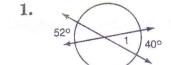
5.



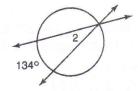


Find the measure of each numbered angle.

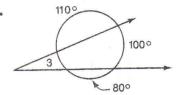
10-6



2.

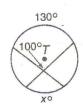


3.

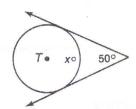


Given  $\odot T$ , find the value of x.

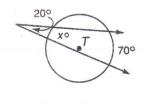
4.



5.

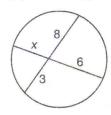


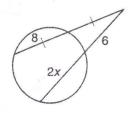
6.



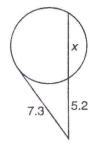
Find the value of x to the nearest tenth. Assume segments that appear tangent to be tangent.

1.





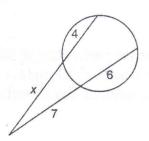
3.

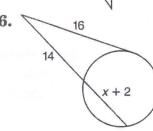


4.



5.







10-8

Determine the coordinates of the center and the measure of the radius for each circle whose equation is given.

1. 
$$(x - 7.2)^2 + (y + 3.4)^2 = 14.44$$

**2.** 
$$\left(x + \frac{1}{2}\right)^2 + (y - 2)^2 = \frac{16}{25}$$

3. 
$$(x-6)^2 + (y-3)^2 - 25 = 0$$

Graph each circle whose equation is given. Label the center and measure of the radius on each graph.

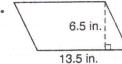
**4.** 
$$(x-2.5)^2 + (y+1)^2 = 12.25$$

Find the area of each figure.

1.

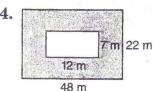


2.

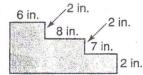


Find the area of each shaded region. Assume that angles that appear to be right are right angles.

11-1

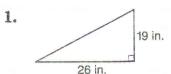


5.

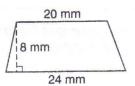


Find the area of each figure.

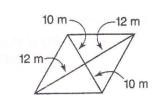
11-2



2.



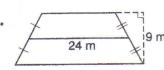
3.



4.



5



6.

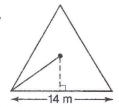


8. A rhombus has a perimeter of 100 meters and a diagonal 30 meters long. Find the area of the rhombus.

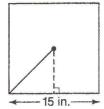
11-3

Find the apothem, area, and perimeter of each regular polygon. Round your answers to the nearest tenth.

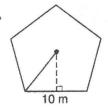
1.



2.

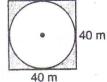


3.



Find the area of each shaded region. Assume that all polygons are regular. Round your answers to the nearest tenth.

6.

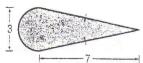


Find the area of each figure. Round to the nearest tenth if necessary.

1.



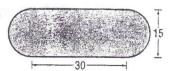
2



3.

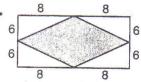


1



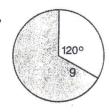
Find the probability that a point chosen at random in each figure lies in the shaded region. Round your answers to the nearest hundredth.

5.



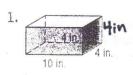
6

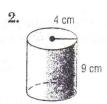


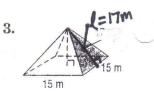


Find the surface area of each solid. Round to the nearest tenth.

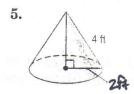
CHAP 12 \$ 13

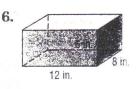






4. 4m 3m 5m





Find the volume of each solid. Round to the nearest tenth.

7.



8.





- ch.9
- Find the image of  $\overline{UV}$  with U(-3, 5) and V(0, 8) under the translation  $(x, y) \rightarrow (x + 2, y 5)$ .
- **2.** Find the image of  $\overline{CD}$  with C(0, 4) and D(3, 4) under a rotation of 90° counterclockwise about the origin.
- **3.** Find the coordinates of Q'' if  $\triangle OPQ$  with O(4, 2), P(5, 0), and Q(1, -2) is reflected in the *x*-axis and then in the *y*-axis.
- H. Determine whether a regular 15-gon tessellates the plane. Explain.
- 5. If CD = 3 and C''D'' = 8, is the dilation an enlargement, reduction, or congruence transformation?