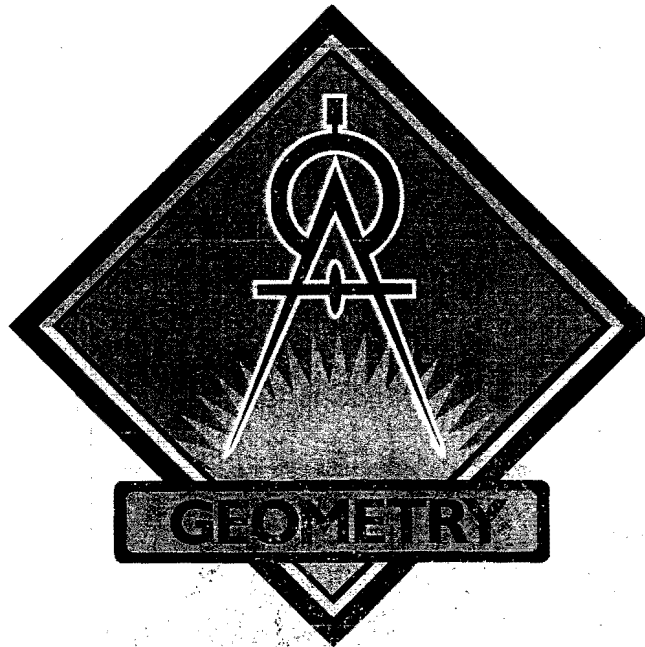


# *Geometry*



## *FINAL Review Packet*



Solve the proportion. (8.1)

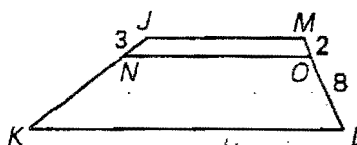
15.  $\frac{7}{10} = \frac{x}{15}$

16.  $\frac{2x + 3}{4} = \frac{5}{6}$

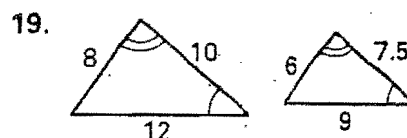
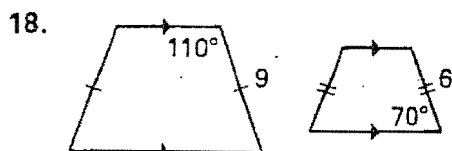
Use the diagram and the given information to find the unknown length. (8.2)

17.  $\frac{JN}{NK} = \frac{MO}{OL}$

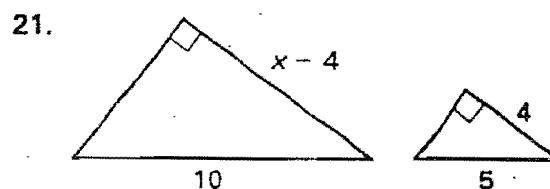
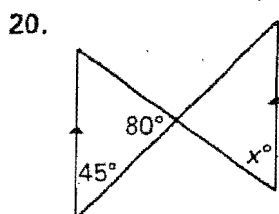
Find NK.



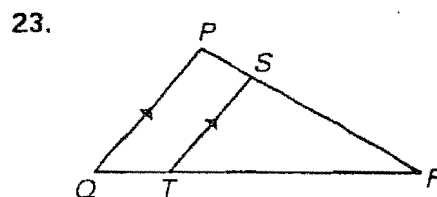
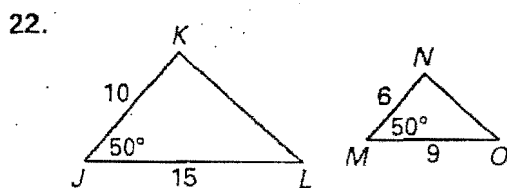
The two polygons are similar. Find the scale factor. (8.3)



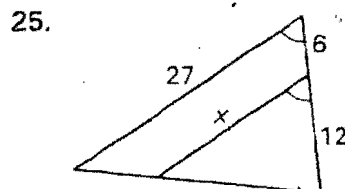
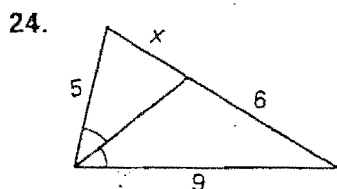
The triangles are similar. Find the values of the variable. (8.4)



Are the triangles similar? If so, state the similarity and the postulate or theorem that justifies your answer. (8.5)

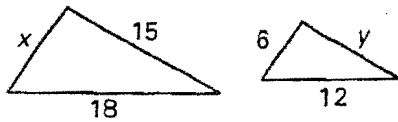


Find the value of the variable. (8.6)

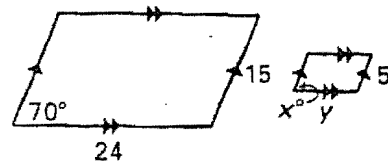


The two polygons are similar. Find  $x$  and  $y$ . (8.3)

15.



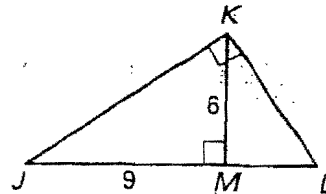
16.



Find the given length. Round decimals to the nearest tenth. (9.1)

17. Find  $ML$ .

18. Find  $KL$ .



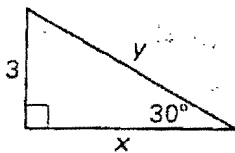
The numbers below represent the sides of a triangle. Classify the triangle as *right*, *acute* or *obtuse*. (9.3)

19. 5, 8, 10

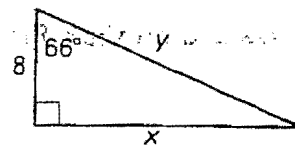
20. 5, 12, 13

Find the value of the given variables. Write answers in simplest radical form if possible. (9.4, 9.5)

21.

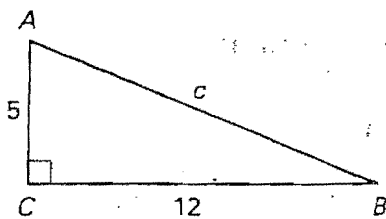


22.

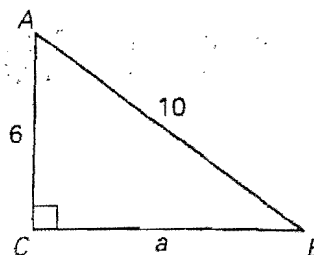


Solve the right triangle. Round your answers to the nearest tenth. (9.6)

23.



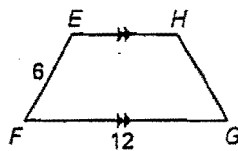
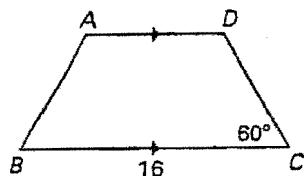
24.



$ABCD \sim EFGH$  (8.3)

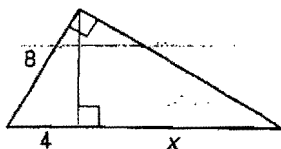
14. Find  $AB$ .

15. Find  $m\angle E$ .

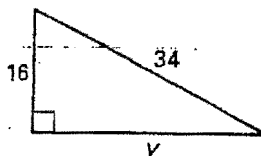


Find the value of the given variable. (9.1, 9.2)

16.

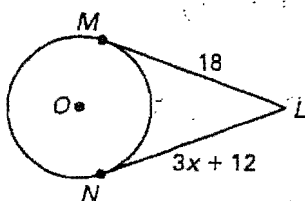


17.

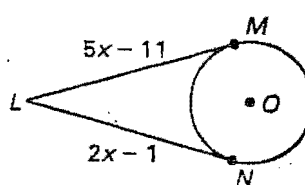


$\overline{LM}$  and  $\overline{LN}$  are tangent to  $\odot O$ . Find the value of  $x$ . (10.1)

18.



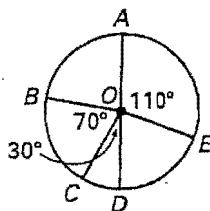
19.



$\overline{AD}$  is a diameter of  $\odot O$ . Find the indicated measure. (10.2)

20.  $m\widehat{ABC} = ?$

21.  $m\widehat{CDE} = ?$



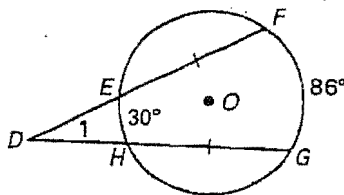
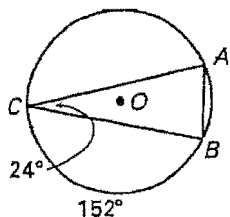
Find the measure of the arc or angle. (10.3, 10.4)

22.  $m\widehat{AB} = ?$

23.  $m\widehat{AC} = ?$

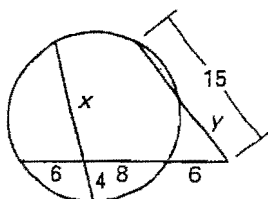
24.  $m\angle 1 = ?$

25.  $m\widehat{EF} = ?$

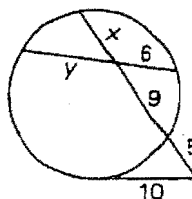


Find the value of  $x$  and  $y$ . (10.5)

26.



27.

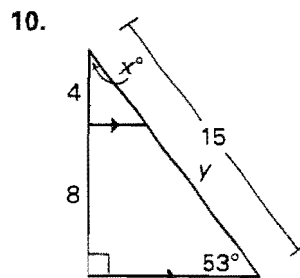
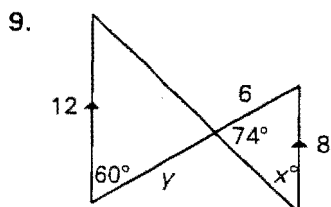


Write the standard equation of a circle with the given center and radius. (10.6)

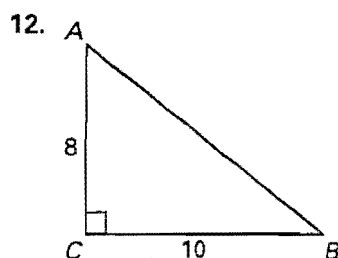
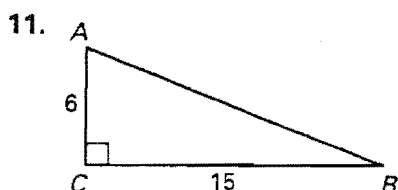
28. center  $(2, 3)$  and radius  $= 4$

29. center  $(-1, 2)$  and radius  $= 3$

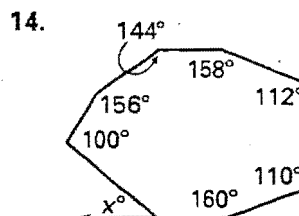
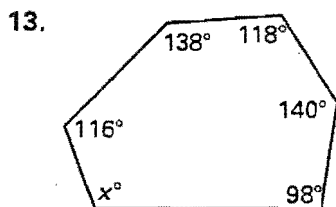
The triangles are similar. Find the values of the variables. (8.6)



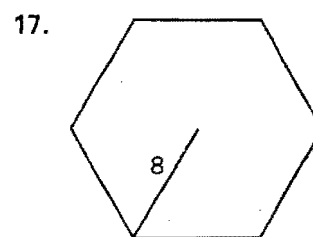
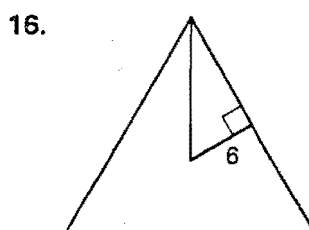
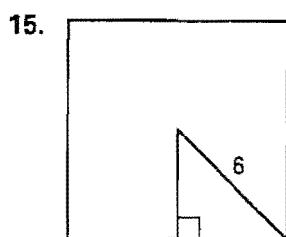
Use the diagram to find the measure of  $\angle A$  and  $\angle B$  to the nearest degree. (9.6)



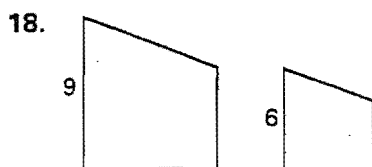
Find the value of  $x$ . (11.1)



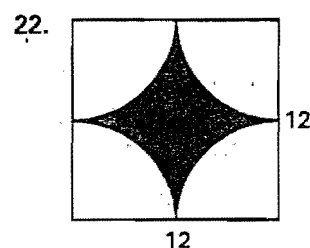
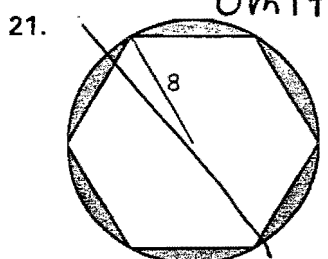
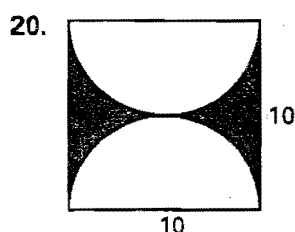
Find the perimeter and area of the regular polygon. (11.2)



The polygons below are similar. Find the ratio (large to small) of their perimeters and of their areas. (11.3)

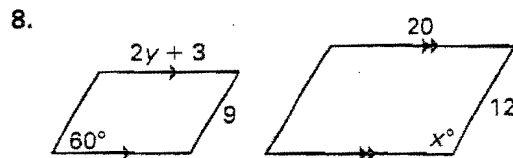
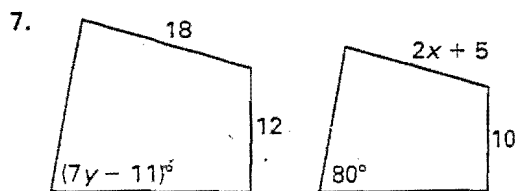


Find the area of the shaded region. Use  $\pi \approx 3.14$  and round your answer to two decimal places. (11.5)

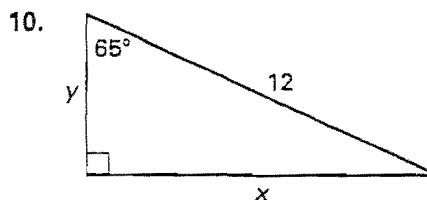
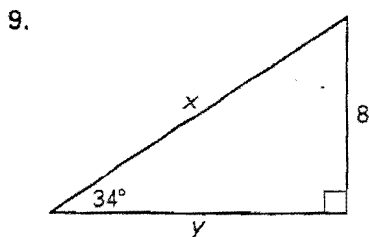


4

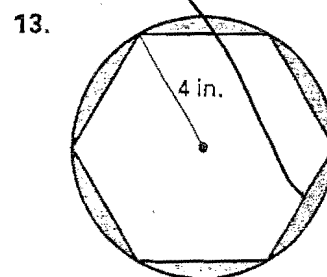
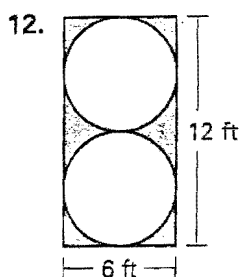
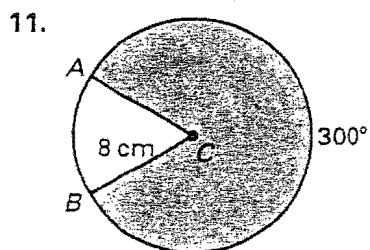
The two polygons are similar. Find the values of  $x$  and  $y$ . (8.3)



Find the values of  $x$  and  $y$  to the nearest tenth. (9.5)



Find the area of the shaded region. Round your answers to two decimal places. (11.5)



Omit

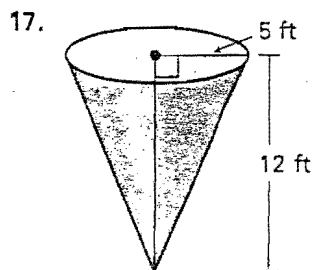
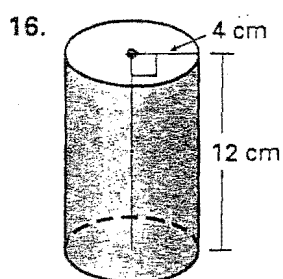
Use Euler's Theorem to find the unknown number. (12.1)

14. Faces: 8  
Vertices: ?  
Edges: 12

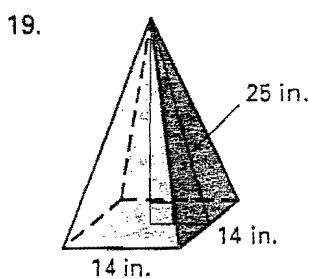
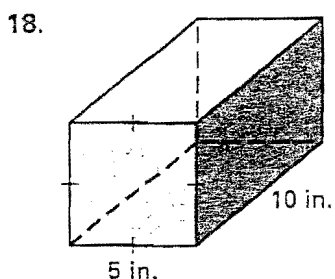
15. Faces: 5  
Vertices: 9  
Edges: ?

Omit

Find the surface area. Round your answers to two decimal places. (12.2, 12.3)



Find the volume. (12.4, 12.5)



# Cumulative Review

- ①
15. 10.5
  16.  $\frac{1}{6}$
  17. 12
  18.  $\frac{3}{2}$
  19.  $\frac{4}{3}$
  20.  $55^\circ$
  21. 12
  22.  $\triangle JKL \sim \triangle MNO$   
SAS
  23.  $\triangle PQR \sim \triangle STR$   
AA
  24.  $\frac{10}{3}$
  25. 18

- ②
15.  $x=9, y=10$
  16.  $x=70^\circ, y=8$
  17. 4
  18. 7.2
  19. obtuse
  20. right
  21.  $x=3\sqrt{3}, y=6$
  22.  $x=18.0, y=19.7$
  23.  $c=13$   
 $m\angle A = 67.4^\circ$   
 $m\angle B = 22.6^\circ$
  24.  $a=8$   
 $m\angle A = 53.1^\circ$   
 $m\angle B = 36.9^\circ$
  25.  $\langle 4, 4 \rangle, 5.7$
  26.  $\langle 4, -3 \rangle, 5.0$

- ③
14. 8
  15.  $120^\circ$
  16. 12
  17. 30
  18. 2
  19.  $\frac{10}{3}$
  20.  $150^\circ$
  21.  $100^\circ$
  22.  $48^\circ$
  23.  $160^\circ$
  24.  $28^\circ$
  25.  $122^\circ$
  26.  $x=12, y=8$
  27.  $x=6, y=9$
  28.  $(x-2)^2 + (y-3)^2 = 16$
  29.  $(x+1)^2 + (y-2)^2 = 9$

- ④
9.  $x=46, y=9$
  10.  $x=37, y=10$
  11.  $m\angle A = 68^\circ, m\angle B = 22^\circ$
  12.  $m\angle A = 51^\circ, m\angle B = 39^\circ$
  13. 110
  14. 40
  15.  $33.94u, 72u^2$
  16.  $62.35u, 187.06u^2$
  17.  $48u, 166.28u^2$
  18.  $3:2, 9:4$
  19.  $3:4, 9:16$
  20.  $21.5u^2$
  21.  $34.68u^2$
  22.  $30.96u^2$

⑤

7.  $x = 5, y = 13$
8.  $x = 120, y = 6$
9.  $x = 14.3, y = 11.9$
10.  $x = 10.9, y = 5.1$
11.  $167.55 \text{ cm}^2$
12.  $15.45 \text{ ft}^2$
13.  $8.70 \text{ in}^2$
14.  $6$
15.  $12$
16.  $402.12 \text{ cm}^2$
17.  $282.74 \text{ ft}^2$
18.  $250 \text{ in}^3$
19.  $1568 \text{ in}^3$
20.  $V = 268.08 \text{ in}^3$   
 $SA = 201.06 \text{ in}^2$
21.  $V = 1.77 \text{ ft}^3$   
 $SA = 7.07 \text{ ft}^2$

⑥

3.  $30^\circ$
4.  $120^\circ$
5.  $11$
6.  $8$

7.

Statements	Reasons
1. $\overline{AB} \parallel \overline{XY}$	1. Given
2. $\angle ABO \cong \angle XYO$	2. Alternate Int. $\angle$ s Thm.
3. $O$ is midpoint of $\overline{BY}$ .	3. Given
4. $\overline{BO} \cong \overline{YO}$	4. Def. of midpoint
5. $\angle AOB \cong \angle XOY$	5. Vertical $\angle$ s Thm.
6. $\triangle ABO \cong \triangle XYO$	6. ASA Congruence Postulate

8.

Statements	Reasons
1. $\angle A \cong \angle D$ $\angle ABC \cong \angle DCB$	1. Given
2. $\overline{BC} \cong \overline{BC}$	2. Reflexive prop. of congruence
3. $\triangle ABC \cong \triangle DCB$	3. AAS Congruence Postulate
4. $\overline{AB} \cong \overline{DC}$	4. Corresponding parts of $\cong \triangle$ s are $\cong$ .

9. 4

10. 5

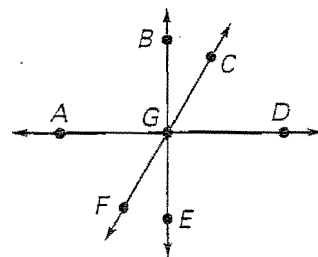




Complete the statement given that  $m\angle AGB = m\angle DGB = 90^\circ$ . (2.6)

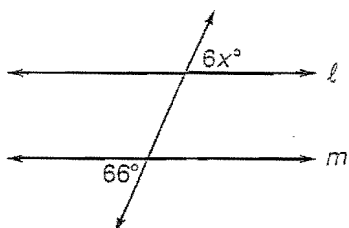
3. If  $m\angle CGD = 60^\circ$ , then the  $m\angle BGC = \underline{\hspace{1cm}}$ .

4. If  $m\angle FGA = 60^\circ$ , then the  $m\angle AGC = \underline{\hspace{1cm}}$ .

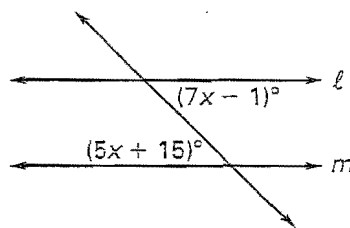


Find the value of  $x$  that makes  $l \parallel m$ . (3.4)

5.



6.

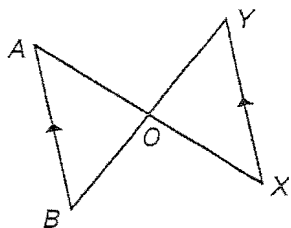


Prove the following using a two-column format. (4.3 and 4.4)

7. Given:  $\overline{AB} \parallel \overline{XY}$

$O$  is a midpoint of  $\overline{BY}$ .

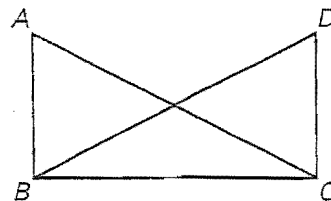
Prove:  $\triangle ABO \cong \triangle XYO$



8. Given:  $\angle A \cong \angle D$

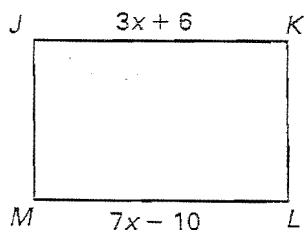
$\angle ABC \cong \angle DCB$

Prove:  $\overline{AB} \cong \overline{DC}$



Find the value of  $x$ . (6.4)

9.  $JKLM$  is a rectangle.



10.  $TCBY$  is a rhombus.

