

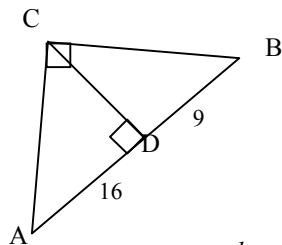


**CURRICULUM AND INSTRUCTIONAL SERVICES  
MATHEMATICS COMMON ASSESSMENT REVIEW  
Honors Geometry (322022)**

Part 1:

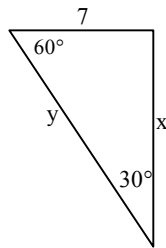
1. How long is a string reaching from the top of a 15-ft pole to a point 13 feet from the base of the pole? 1. \_\_\_\_\_
- $\sqrt{394}$  feet
  - $2\sqrt{101}$  feet
  - $\sqrt{66}$  feet
  - $2\sqrt{14}$  feet

2. Find the length of  $\overline{CD}$ . 2. \_\_\_\_\_



*drawing is not to scale*

3. Find the value of  $x$  and  $y$ . 3.  $x =$  \_\_\_\_\_



$y =$  \_\_\_\_\_

4. Which quadrilateral has all sides congruent and its diagonals congruent? 4. \_\_\_\_\_

- rhombus
- parallelogram
- rectangle
- square

5. Which statement is not always true? 5. \_\_\_\_\_

- The base angles of an isosceles trapezoid are congruent.
- The midsegment of a trapezoid is parallel to the bases.
- The bases of a trapezoid are parallel.
- The legs of a trapezoid are congruent.

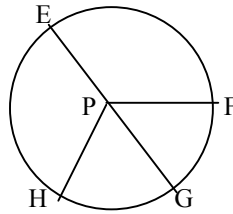
6. The measures of the interior angles of a convex quadrilateral are  $x$ ,  $2x$ ,  $3x$ , and  $4x$ . What is the measure of the second largest interior angle? 6. \_\_\_\_\_

- $36^\circ$
- $144^\circ$
- $108^\circ$
- $72^\circ$

7. In parallelogram WXYZ,  $WX = 26$  inches and  $XY = 30$  inches. What is the perimeter of WXYZ? 7. \_\_\_\_\_

8. Which arc of  $\odot P$  is a semicircle?

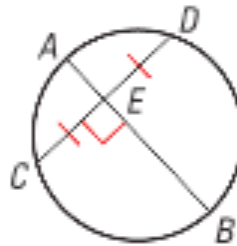
- a.  $\widehat{FEH}$
- b.  $\widehat{EFG}$
- c.  $\widehat{FH}$
- d.  $\widehat{EH}$



8. \_\_\_\_\_

9. Choose the true statement that refers to the figure.

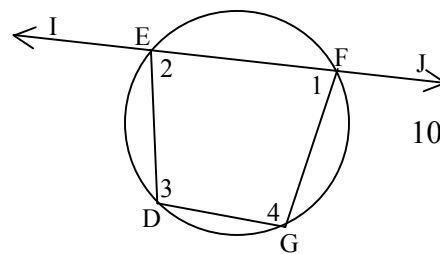
- a.  $\widehat{CBD}$  is a minor arc.
- b.  $\widehat{CAD}$  is a major arc.
- c.  $\overline{AB}$  is a diameter.
- d.  $\widehat{AD} \cong \widehat{BC}$



9. \_\_\_\_\_

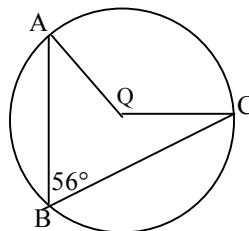
10. Given:  $m\angle IED = 94^\circ$  and  $m\angle JFG = 92^\circ$   
Find the measures of angles 1, 2, 3, 4. (not drawn to scale)

- a.  $m\angle 1 = 86^\circ$ ,  $m\angle 2 = 88^\circ$ ,  $m\angle 3 = 92^\circ$ ,  $m\angle 4 = 94^\circ$
- b.  $m\angle 1 = 88^\circ$ ,  $m\angle 2 = 86^\circ$ ,  $m\angle 3 = 94^\circ$ ,  $m\angle 4 = 92^\circ$
- c.  $m\angle 1 = 88^\circ$ ,  $m\angle 2 = 86^\circ$ ,  $m\angle 3 = 92^\circ$ ,  $m\angle 4 = 94^\circ$
- d.  $m\angle 1 = 86^\circ$ ,  $m\angle 2 = 88^\circ$ ,  $m\angle 3 = 94^\circ$ ,  $m\angle 4 = 92^\circ$



10. \_\_\_\_\_

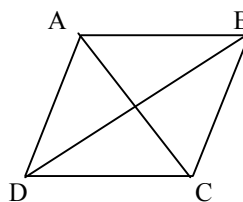
11. Given:  $\odot Q$  and  $m\angle B = 56^\circ$ . Find  $m\widehat{AC}$ .



11. \_\_\_\_\_

12. In rhombus  $ABCD$ ,  $AB=20$  and  $AC=32$ .  
Find the area of the rhombus.

- a. 379.3
- b. 384
- c. 506
- d. 499.6



12. \_\_\_\_\_

13. A regular hexagon has an apothem of 2.  
Find its area.

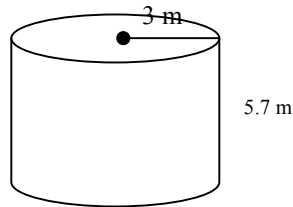
13. \_\_\_\_\_

- a.  $8\sqrt{3}$  square units
- b.  $4\pi$  square units
- c.  $4\sqrt{3}$  square units
- d.  $\frac{16\pi}{3}$  square units

14. Find the surface area of the cylinder to the nearest square unit. Use  $\pi \approx 3.14$ .

14. \_\_\_\_\_

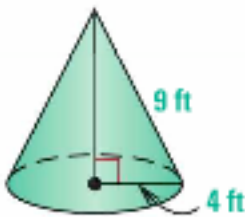
- a.  $82 \text{ m}^2$
- b.  $26 \text{ m}^2$
- c.  $17 \text{ m}^2$
- d.  $164 \text{ m}^2$



15. Find the surface area and volume of the right cone below.

15. TSA= \_\_\_\_\_

V= \_\_\_\_\_



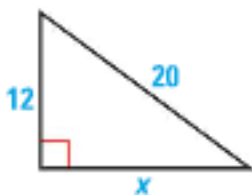
16. A regular pentagon has an apothem of 6 inches. Find its area to the nearest hundredth.

16. \_\_\_\_\_

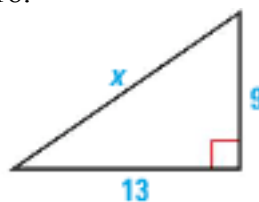
Part 2: Show all work. Diagrams are not drawn to scale.

**Find the value of  $x$ . Give all answers in simplest radical form.**

17.



18.



17. \_\_\_\_\_

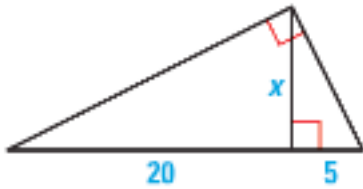
18. \_\_\_\_\_

19. Find the area of an isosceles triangle with side lengths 10 cm, 13 cm, and 13 cm.

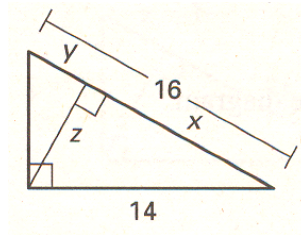
19. \_\_\_\_\_

**Find the value(s) of the variable(s).**

20.



21.

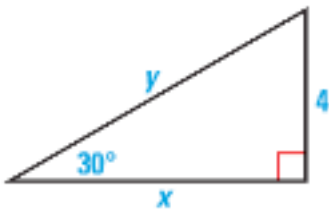


20. \_\_\_\_\_

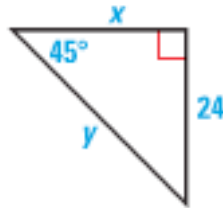
21. \_\_\_\_\_

**Find the value of  $x$  and  $y$ . Give all answers in simplest radical form.**

22.



23.



22.  $x =$  \_\_\_\_\_

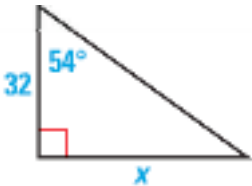
$y =$  \_\_\_\_\_

23.  $x =$  \_\_\_\_\_

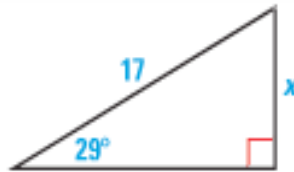
$y =$  \_\_\_\_\_

**Find the value of  $x$ . Round to the nearest hundredth.**

24.



25.

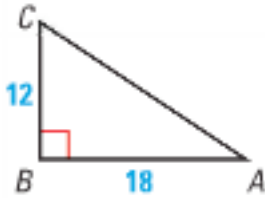


24. \_\_\_\_\_

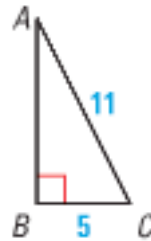
25. \_\_\_\_\_

Use a calculator to approximate the measure of  $\angle A$  to the nearest tenth of a degree.

26.



27.



26. \_\_\_\_\_

27. \_\_\_\_\_

28. A slide 5.2 m long makes an angle of  $32^\circ$  with the ground.  
How high is the top of the slide above the ground? (*Hint: Draw a diagram.*)  
Round your answer to the nearest hundredth.

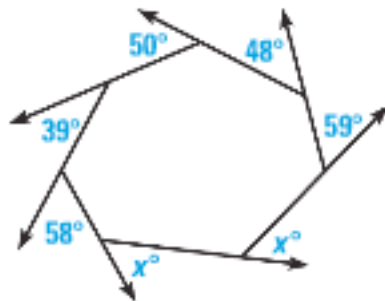
28. \_\_\_\_\_

29. Find the sum of the measures of the interior angles of a convex hexagon.

29. \_\_\_\_\_

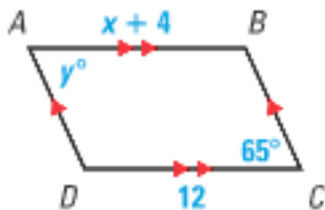
30. Find the value of  $x$ .

30. \_\_\_\_\_

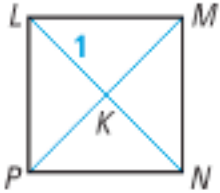


31. Find the values of  $x$  and  $y$  that make the figure a parallelogram.

31.  $x =$  \_\_\_\_\_  
 $y =$  \_\_\_\_\_



The diagonals of square LMNP intersect at K. Given that  $LK=1$ , find the indicated measures.



32.  $m\angle LPK =$  \_\_\_\_\_

33.  $MP =$  \_\_\_\_\_

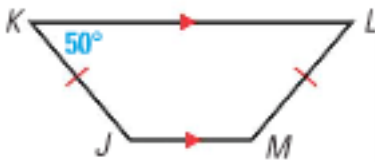
34.  $LP =$  \_\_\_\_\_

35. The diagonals of a rhombus are 6 inches and 8 inches.  
Find the length of a side. (*Hint:* Draw and label a diagram).

35. \_\_\_\_\_

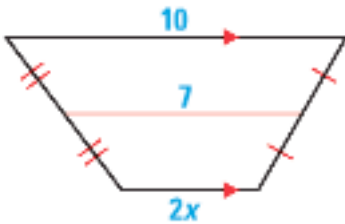
36. Find the measure of angle M.

36. \_\_\_\_\_



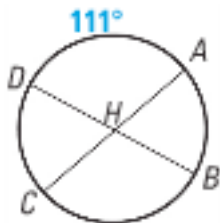
37. Find the value of x.

37. \_\_\_\_\_



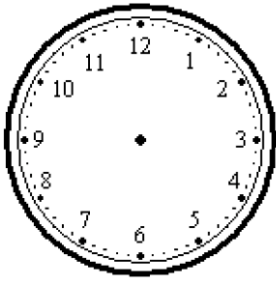
38. Find the measure of  $\angle AHB$  in  $\odot H$ .

38. \_\_\_\_\_



39. How many degrees does a minute hand move in 35 minutes?  
Explain your answer.

39. \_\_\_\_\_



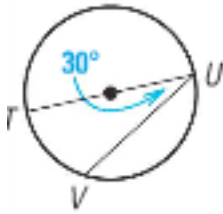
Explain: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

40. If the minute hand is 8 inches, how far did the tip of it travel in the problem above?

40. \_\_\_\_\_

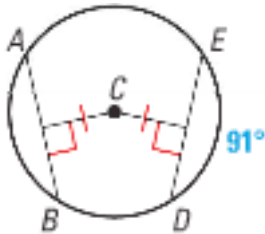
41. If  $m\angle TUV = 30^\circ$ , find  $m\widehat{VU}$

41. \_\_\_\_\_



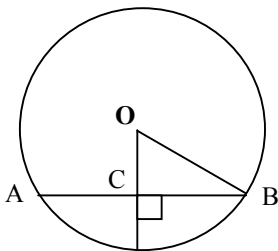
42. If  $m\widehat{ED} = 91^\circ$  in  $\odot C$ , find  $m\widehat{AB}$

42. \_\_\_\_\_



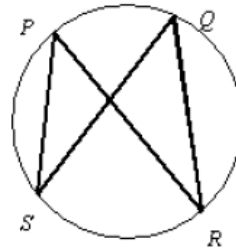
43. Given  $\odot O$  with radius 13 and  $OC = 5$ . Find  $AB$ .

43. \_\_\_\_\_



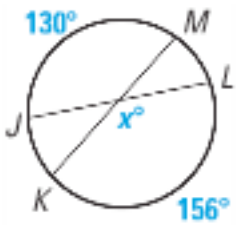
44. Find  $m\angle SPR$  if  $m\angle SPR = 2x + 8$  and  $m\angle SQR = 3x - 24$ .

44. \_\_\_\_\_

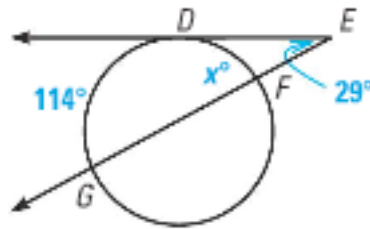


**Find the value of  $x$ .**

45.



46.



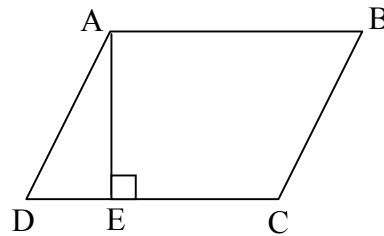
45. \_\_\_\_\_

46. \_\_\_\_\_

47.  $ABCD$  is a parallelogram with  $AB=14$ ,  $DE=3$ , and  $AD=5$ .

47 a. \_\_\_\_\_

a. Find  $AE$ .



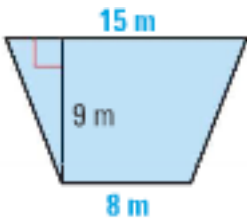
b. Find the area of quadrilateral  $ABCE$ .

b. \_\_\_\_\_

48. Your neighbor recently put a new garden in their rectangular yard. The yard has a length of 45 feet and a width of 30 feet. The garden is in the shape of a rhombus. The diagonals of the rhombus are 25 feet and 18 feet long.
- Sketch and label a diagram showing the yard and garden.
  - Find the area of the lawn before the garden was put in.
  - Find the area of the garden.
  - Find the area of the lawn remaining after the garden was installed.
  - Flowers for the garden cost \$6.00 per square foot. How much will it cost to completely cover the garden with flowers?

49. Find the area of trapezoid.

49. \_\_\_\_\_

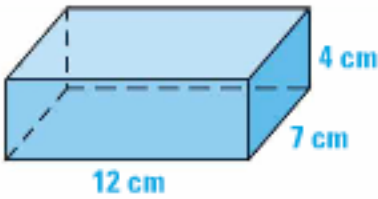


50. A floor tile is in the shape of a regular hexagon and has a perimeter of 48 inches. Find the side length and area of the tile.

50. side = \_\_\_\_\_  
 A = \_\_\_\_\_

51. Find the volume of the right prism below.

51.  $V =$  \_\_\_\_\_



52. The pyramid below has a square base and a slant height of 9 cm. Find its lateral surface area, total surface area and volume.

52. LSA= \_\_\_\_\_

TSA= \_\_\_\_\_

V= \_\_\_\_\_



53. Find the surface area and volume of a sphere that has a diameter of 5 centimeters. Express your answer in terms of  $\pi$ .

53. SA = \_\_\_\_\_  
V = \_\_\_\_\_

54. Solve the triangle whose sides are 5, 6, and 8 inches. Find its area. (nearest hundredth)

55. Solve the triangle with angle measures of  $85^\circ$  and  $29^\circ$  if the side opposite the  $85^\circ$  angle is 9 cm. (nearest hundredth)