

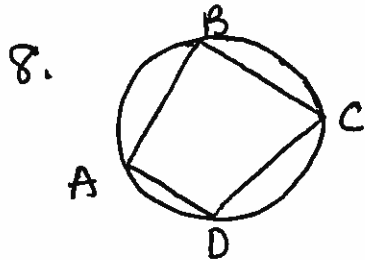
Final Exam Review : Discovery Geometry

- Find the equation of a line perpendicular to $y = 4x - 3$ that contains $(-5, 7)$ in point-slope form.
- Which line is parallel to $y = -\frac{2}{3}x + 4$?
 a) $y = \frac{2}{3}x + 2$ b) $y = \frac{3}{2}x - 1$ c) $y = -\frac{2}{3}x + 7$ d) $y = -\frac{3}{2}x + 5$
- Which is not a rigid transformation?
 a) dilation b) reflection c) translation d) rotation
- Find the height of a cylinder w/ a diameter of 16 in and a volume of 960π in³.
- In a polygon a vertex is connected to any non-adjacent vertex by a _____.
- If 2 shapes are similar ...

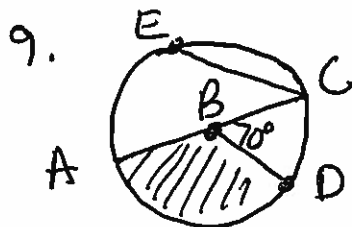
①

②

- Pairs of interior and exterior \angle 's in a polygon are ...



If $m\angle ADC$ is 98° , Find the $m\angle B$.



Find the area of the shaded region if $\overline{AB} = 9$ cm.

Find $m\angle ECA$. What type of \angle ?

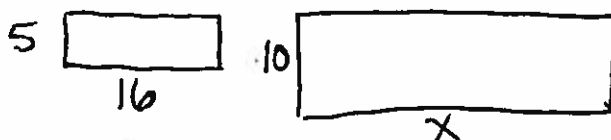
Find $m\widehat{CD}$.

Name a central \angle .

Name a major arc.

Name a chord that is not the diameter.

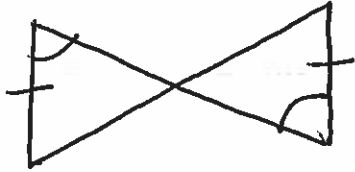
- The 2 rectangles are similar.



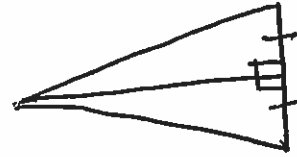
Find x .

11. Sum of exterior \angle 's of a 26-gon.
12. Sum of the interior \angle 's of a 24-gon.
13. Each interior \angle of a 18-gon.

14. Δ 's are \cong by _____.

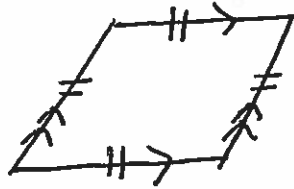


15. Δ 's are \cong by _____.



16. the diagonals of a parallelogram _____.

17.



← Regular?
yes OR no.

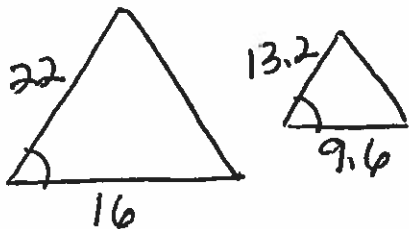
18. T/F A radius of a circle is also a chord.

19. T/F Every diameter of a circle is a chord.

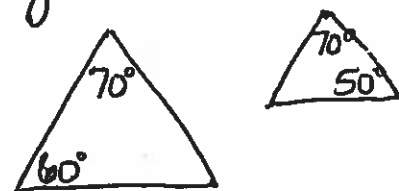
20. T/F The longest chord of a circle is the diameter

21. The 2 Δ 's are similar by...

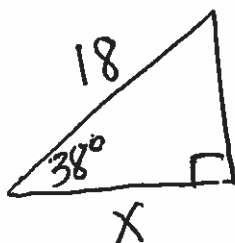
①



②



22.



Find X.

Final Test

Form A

Chapters 1-12

1. What is the measure of each exterior angle of a regular decagon?

2. Find the midpoint of \overline{AB} with $A(-1, 5)$ and $B(6, -3)$.

3. The lengths of two sides of a triangle are 6 and 13. Which can be the length of the third side?

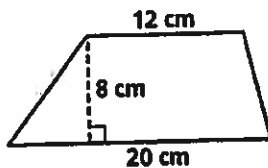
- A. 4 B. 15 C. 22 D. 7

4. Which pair of lines is perpendicular?

- F. $y = 5x + 2$ G. $y = x - 1$
 $y = 5x + 3$ $y = -x + 7$
 H. $y = 4x + 5$ J. $y = 2x - 1$
 $y = \frac{1}{4}x - 2$ $y = -2x + 2$

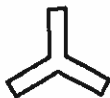
5. What is the image of $(-2, -5)$ reflected across $x = 2$?

6. Find the area of the trapezoid.



7. Find the area of a rhombus with diagonal lengths of 12 cm and 8 cm.

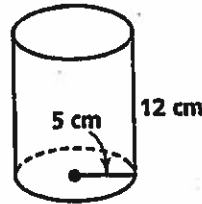
8. What types of symmetry does the figure have?



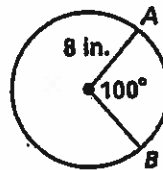
9. Which of the following transformations are isometries?

- I. rotation II. glide reflection III. dilation
 A. I only B. I, II, and III
 C. I and III only D. I and II only

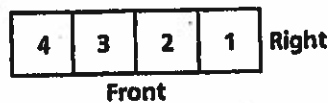
10. Draw a net for the figure, and label its appropriate dimensions.



11. Find the length of \overline{AB} . Round your answer to the nearest tenth.



12. Create an isometric drawing from the foundation drawing.



13. Find the area of a regular octagon with side length 5 cm and apothem 6 cm.

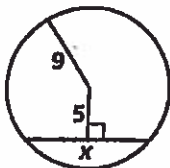
14. Find the volume of a square pyramid with height 12 cm and slant height 15 cm.

Final Test (continued)

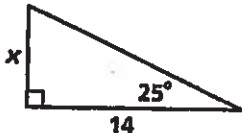
Form A

Chapters 1–12

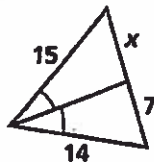
15. Sketch and describe the locus of all points in a plane 3 units from the line $y = -2$.
16. The base of a triangle is 8 m, and the height is 10 m. Find the area.
17. Find the value of x . Round your answer to the nearest tenth.



18. Which is the equation of the circle with center $(-3, -2)$ passing through $(1, -5)$?
 - F. $(x + 3)^2 + (y + 2)^2 = 25$
 - G. $(x - 3)^2 + (y - 2)^2 = 5$
 - H. $(x - 1)^2 + (y + 5)^2 = 5$
 - J. $(x + 3)^2 + (y + 2)^2 = 5$
19. Find the value of x . Round your answer to the nearest tenth.

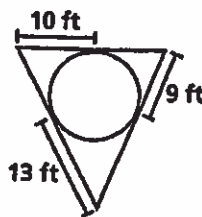


20. Find the value of x .

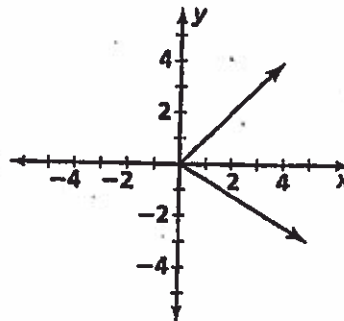


21. Two figures have a similarity ratio of 3 : 7. If the area of the larger figure is 294 cm^2 , what is the area of the smaller figure?

22. Two buildings are 200 ft apart. The height of the taller building is 135 ft. The angle of depression from the top of the taller building to the top of the shorter building is 7° . Find the height of the shorter building to the nearest foot.
23. Find the perimeter of the triangle that circumscribes the circle.



24. Find the sum of the vectors. Give your answer in ordered pair notation.



25. Find the value of x .



26. What is the image of $(2, -2)$ rotated 270° about the origin?
27. If $AB = 11$, $BC = 8$, and $AC = 14$, list the angles of $\triangle ABC$ in order from smallest to largest.
28. Find the distance between $(-5, 7)$ and $(11, -1)$ to the nearest tenth.

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Final Test (continued)

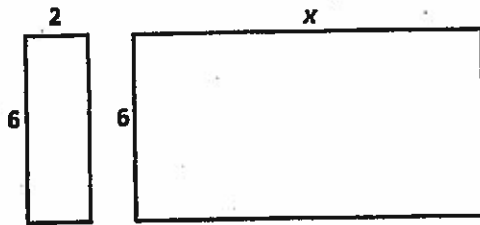
Form A

Chapters 1–12

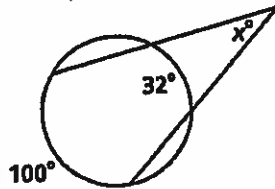
Complete each statement with the word *always*, *sometimes*, or *never*.

- 29. The vertices of a triangle are ? collinear.
- 30. If two lines are cut by a transversal, then alternate interior angles are ? congruent.
- 31. A square is ? a rhombus.
- 32. The diagonals of a rectangle are ? perpendicular.
- 33. An acute triangle and an obtuse triangle are ? congruent.

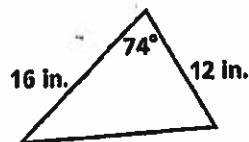
34. The polygons are similar. Find x .



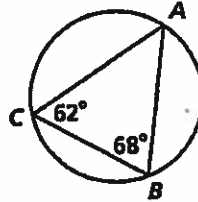
35. Find the value of x .



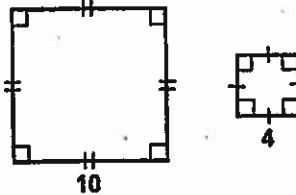
36. Find the area of the triangle. Round your answer to the nearest tenth.



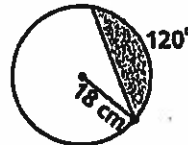
37. Find the measure of \widehat{BC} .



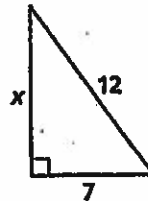
38. For the similar figures, find the ratio of the area of the first to the area of the second.



39. Find the area of the shaded region to the nearest tenth.



40. Find the value of x . Round your answer to the nearest tenth.



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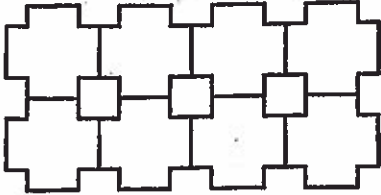
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Final Test (continued)

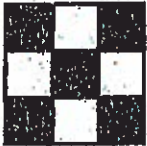
Form A

Chapters 1-12

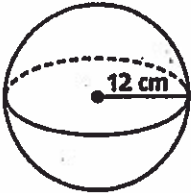
41. Identify the repeating figure that makes up the tessellation.



42. What is the probability that a dart tossed randomly at this board will hit the shaded area? Round your answer to the nearest tenth.

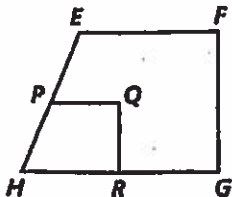


43. a. Find the surface area to the nearest tenth.
b. Find the volume to the nearest tenth.

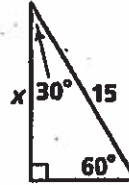


44. Statement: If two angles are congruent, then they have the same measure.
a. Write the converse of the statement.
b. Write the inverse of the statement.
45. $EFGH \sim PQRH$. Complete the proportion and the congruence statement.

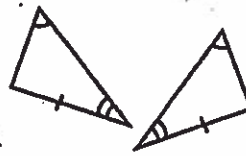
a. $\frac{EF}{GH} = \frac{?}{RH}$
b. $\angle Q \cong ?$



46. Find the value of x . Round your answer to the nearest tenth.



47. Which postulate or theorem would be used to prove the pair of triangles congruent?



48. Give the most precise name for $ABCD$ with vertices $A(3, 4)$, $B(8, 4)$, $C(5, 0)$, and $D(0, 0)$.

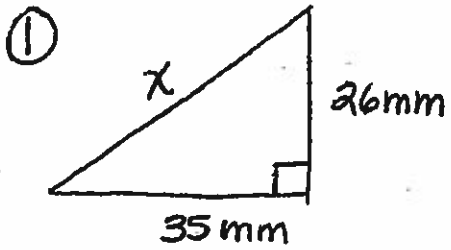
49. Find the value of x .



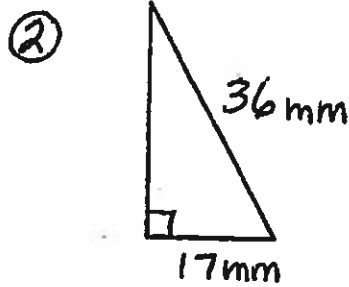
50. What is the equation of the line perpendicular to $y = 3x - 7$ that contains $(6, 8)$?

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$x =$ _____



$x =$ _____

③ Which are the side lengths of a right triangle?

- a) 7, 8, 9
- b) 9, 12, 15
- c) 4, 6, 8

④ The diagonals of a parallelogram _____.

⑤ A segment with endpoints on a circle is _____.

⑥ Points that lie on the same line are _____.

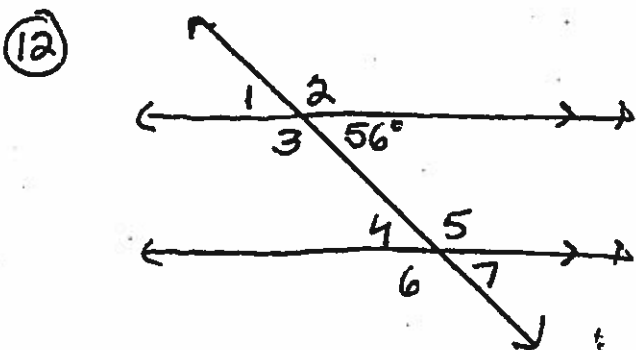
⑦ Complementary \angle 's : _____

⑧ Supplementary \angle 's : _____

⑨ Vertical \angle 's are _____.

⑩ The sum of the interior \angle 's of a regular 10-gon, _____.

⑪ The sum of the exterior \angle 's of a regular decagon, _____.



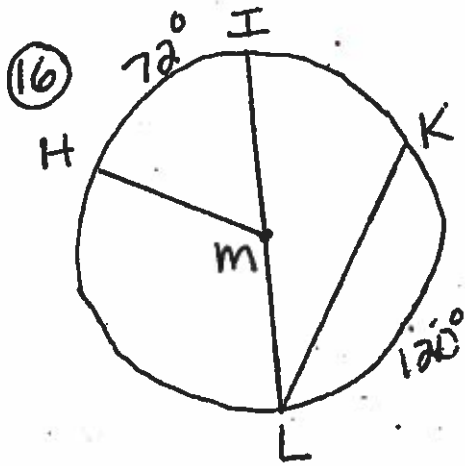
- $m\angle 1 =$ _____
- $m\angle 2 =$ _____
- $m\angle 3 =$ _____
- $m\angle 4 =$ _____
- $m\angle 5 =$ _____
- $m\angle 6 =$ _____
- $m\angle 7 =$ _____

Find the next 3 terms in the pattern:

⑬ 0, 3, 8, 15, 24, _____, _____, _____

⑭ 3, -12, 48, -192, _____, _____, _____

⑮ Name all properties of a parallelogram.



Name the following:

radius: _____

chord: _____

central angle: _____

inscribed angle: _____

minor arc: _____

major arc: _____

$m\angle HMI =$ _____

$m\angle ILK =$ _____

⑰



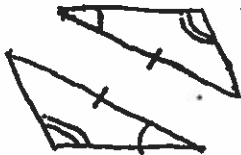
Δ 's are \cong by _____

⑱



Δ 's are \cong by _____

⑲



Δ 's are \cong by _____

⑳

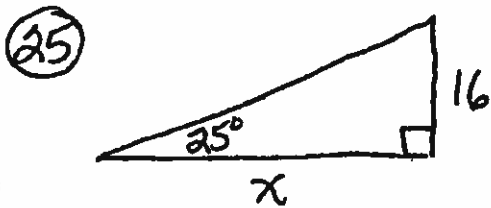
A polygon is regular if _____

21. Find the product. $(5x-4)(3x+9)$

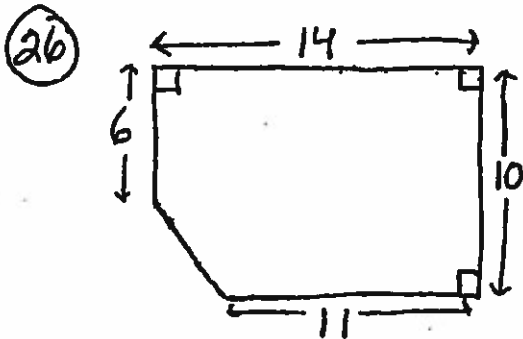
22. Simplify: $(x-y)(x+y)$

23. Simplify: $(a+b)(a+b)$

24. Factor: $x^2+2x-15$

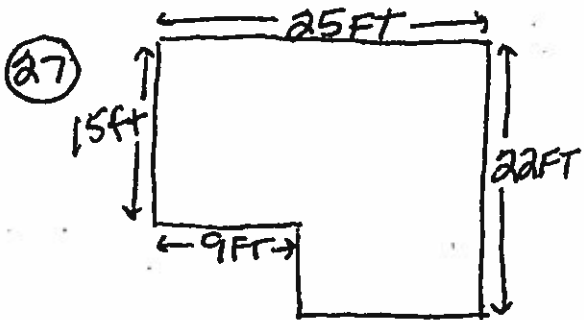


a) $x = \frac{16}{\cos 25^\circ}$ b) $x = \frac{16}{\tan 25^\circ}$
c) $x = 16(\cos 25^\circ)$ d) $x = 16(\tan 25^\circ)$

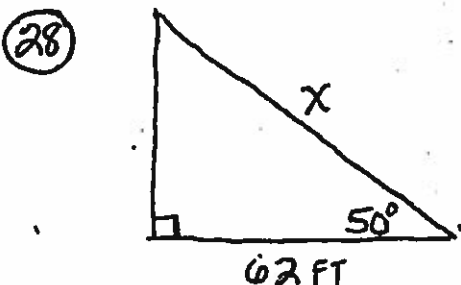


Find the Perimeter.

Find the Area.



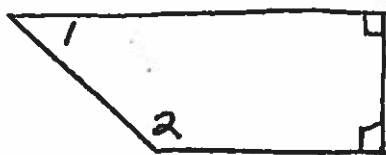
The plans for a swimming pool are shown to the left. If the pool is 6 feet deep, what is the capacity of the swimming pool in cubic feet?



Find x.

29. The area of a right Δ is 36 sq. feet. A 2nd right Δ has a base that is 3 times as long and a height 4 times as long, what's the area of the 2nd Δ ?

30



$m\angle 2$ is 4 times as large as the $m\angle 1$.

What is the $m\angle 2$?

31

If you want to cut out the largest possible circle from a square sheet of paper whose side length is 6 feet, what is a reasonable estimate of the fraction of paper that is left over?

32

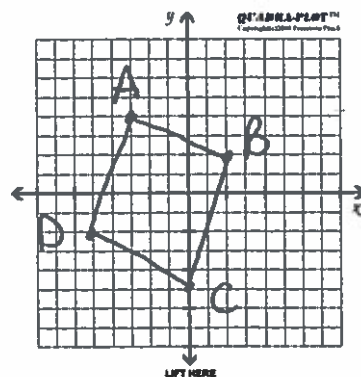
Brett buys enough fencing to enclose 364 square feet of the backyard. If the width of the enclosure is 14 feet what is the length?

33

Which transformation(s) are rigid? reflection, dilation, translation, rotation

34

Reflect over the x-axis



35

Find the new coordinates of $\triangle ABC$ under the rule. $(x-2, y+5)$
A(3,6) B(-2,-4) C(-1,5)

36

2 shapes are similar if...