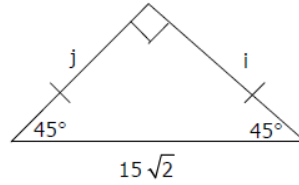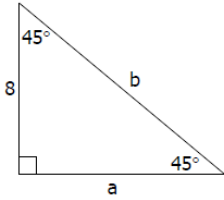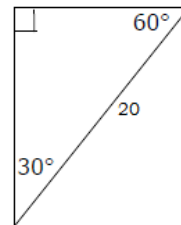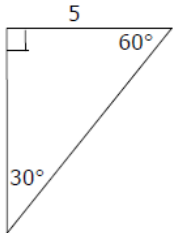NAME _____ DATE _____ PERIOD _____
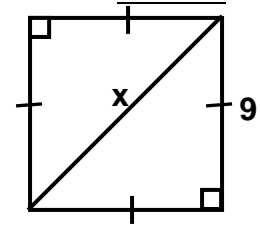
Geometry Final Exam Review

1. In the figures find the missing parts.

2. In the figures find the missing parts.

3. Tom is trying to put a divider diagonally to separate his animals and his play area. If he knows that <u>each side</u> of his backyard is 9ft long, how many feet of fencing will he need to build a divider between them.

4. For each of the following regular Heptagon find:

a) the sum of the interior angles: _____

b) the measure of each interior angle: _____

c) the sum of the exterior angles: _____

d) the measure of each exterior angle: _____

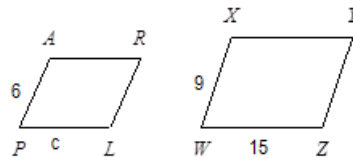5. Find the values of the variables in the parallelogram. The diagram is not to scale.
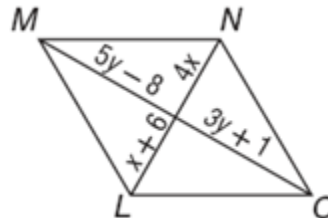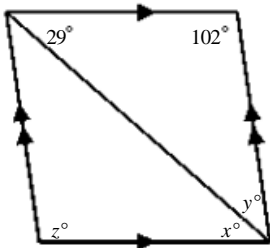
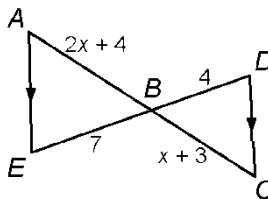6. Solve the proportion: $\dfrac{2}{8} = \dfrac{5}{x}$

7. Solve the proportion for x. $\quad \dfrac{4}{10} = \dfrac{2x}{x+6}$

8. A survey showed that 3 out of every 7 voters would vote in an election. Based on this survey, how many people would vote in a city with 21,000 voters?
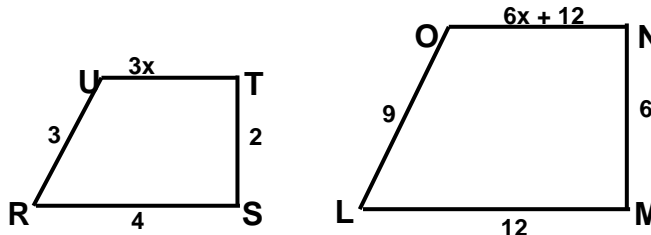
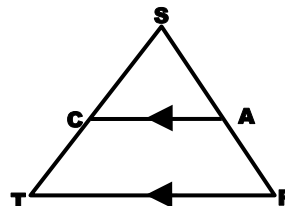9. Parallelogram *PARL* ~ parallelogram *WXYZ*. Find the value of c.

10. Find x and the measures of the indicated parts.
AB and BC

11. Given RSTU ~ LMNO, solve for x.



12. Given the figure, SR = 12, AR = 3, and ST = 15, find SC.

13. If a 15-foot tree casts a 9-foot-long shadow. How tall is a tree that casts a 5-foot-long shadow?

14. Michele wanted to measure the height of her school's flagpole. She placed a mirror on the ground 44 feet from the flagpole, then walked backwards until she was able to see the top of the pole in the mirror. Her eyes were 6 feet above the ground and she was 18 feet from the mirror. Using similar triangles, find the height of the flagpole to the nearest tenth of a foot. (Draw a diagram first.)
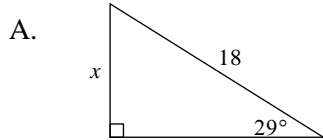
15. Write the trigonometric (sine, cosine, and tangent) ratios for $\angle P$ and $\angle Q$.
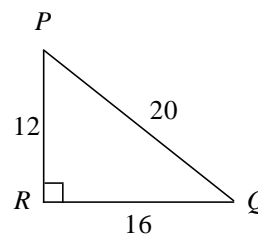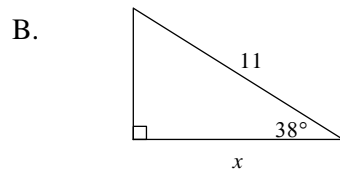

Not drawn to scale

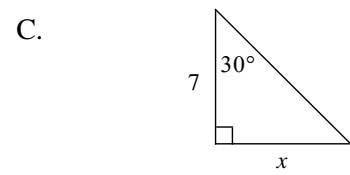*For trigonometry questions #16-18. Remember to set your calculators to degree mode.*

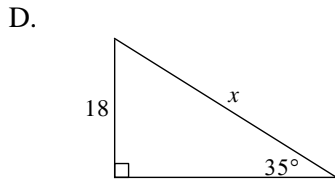**16. Find the value of x. Round sides to the nearest tenth, and angles to the nearest degree.**

A.

18

x
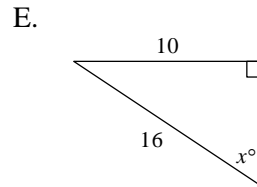
29°

Not drawn to scale

B.

11

38°

x

Not drawn to scale

C.

7

30°

x

Not drawn to scale

D.

18

x

35°

Not drawn to scale

E.

10

16

$x°$
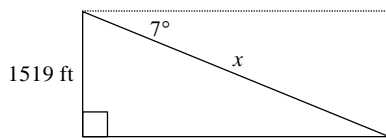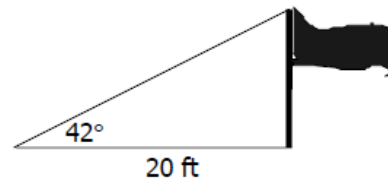
Not drawn to scale

17. To approach the runway, a small plane must begin a 7° descent starting from a height of 1519 feet above the ground. To the nearest tenth of a mile, how many miles from the runway is the airplane at the start of this approach?
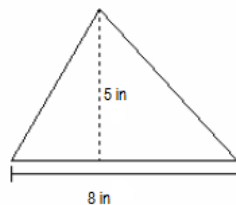
7°

x

1519 ft

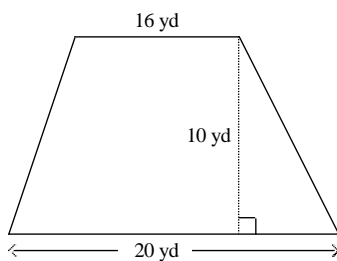Not drawn to scale

18. Determine the height of the flagpole shown in the figure.

42°

20 ft

19. Find the area of the triangle.
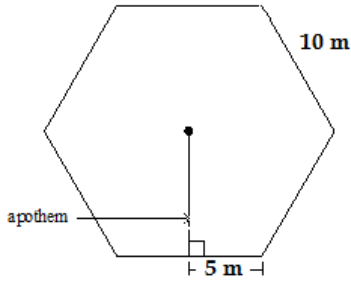
5 in

8 in

20. Find the area of the figure. Round to the nearest tenth if necessary.
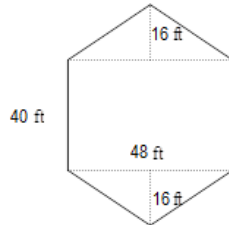
16 yd

10 yd

20 yd

21. The area of a parallelogram is 225 cm² and the height is 15 cm. Find the corresponding base.

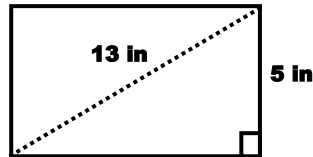22. Find the area of a regular hexagon with side length 10 m. Round to the nearest tenth.

10 m

apothem

⊢ 5 m ⊣

23. Find the area of the composite figure.
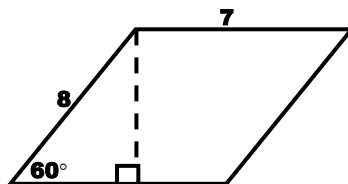
16 ft

40 ft

48 ft

16 ft

24. Find the area of a rectangle that is 14 cm long and 3 cm wide.

25. Find the perimeter of the rectangle shown.

13 in

5 in

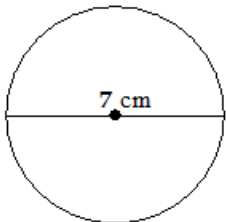26. Find the area of a square with a perimeter of 40 m.

27. Find the area of the parallelogram.

7

8

60°

28. Find the area of a triangle with a base of 18 m and a height of 4 m.
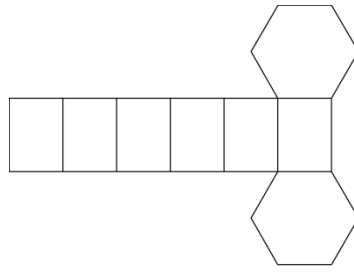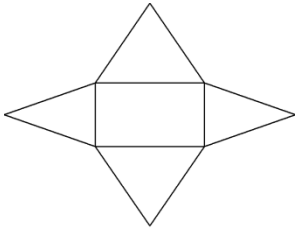
29. A trapezoid with a height of 6 ft has bases of lengths 12 ft and 8 ft. Find the area of the trapezoid.

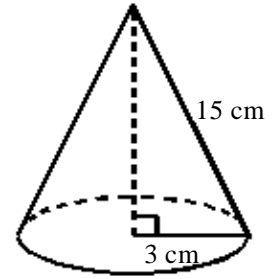30. Find the circumference of the circle. Leave your answer in terms of π .

7 cm

31. Find the area of a circle with a radius of 18 inches is terms of π .

32. Describe the three-dimensional figure that can be made from the given net.

33. Find the surface area of the cone to the nearest square unit. Use π = 3.14.
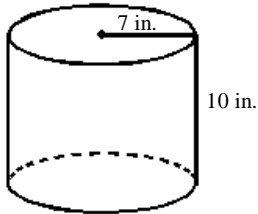
15 cm

3 cm

Not drawn to scale

34. Find the volume of a right rectangular prism with length 10 in., width 9 in., and height 5 in. Round to the nearest tenth, if necessary.

35. Find the surface area and volume of the sphere to the nearest square unit.
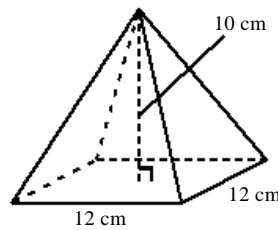
5 mm
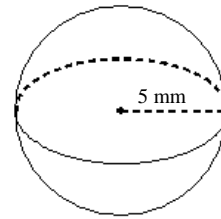
36. Find the surface area and volume of the cylinder to the nearest cubic foot.   Use a calculator.
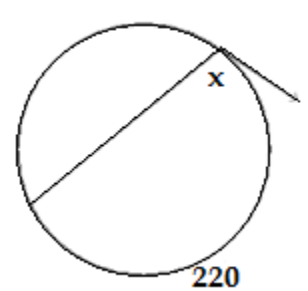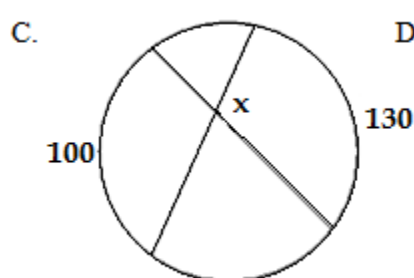
7 in.

10 in.
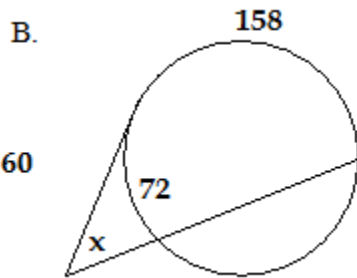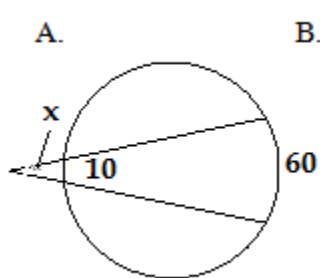
Not drawn to scale

37. Find the lateral area, surface area, and volume of the pyramid.

10 cm

12 cm

12 cm

Not drawn to scale

38. Find the measure of ∠x.

A.

x

10

B.

158

60

72

x

C.

x

100

130

D.

x

220
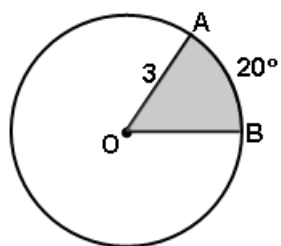
39. $\overline{WZ}$ and $\overline{XR}$ are diameters. Find the measure of arc *ZWX*. (The figure is not drawn to scale.)

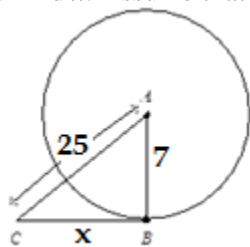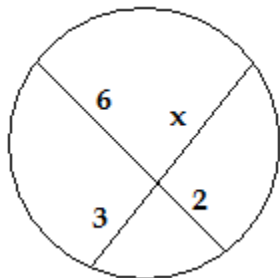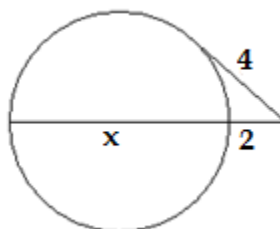40. Identify all the lines in $\odot A$.

Secant: _____
Tangent: _____
Radius: _____
Diameter: _____
Chord: _____
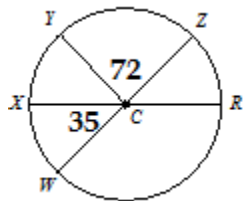
41. Find m(arc)*CFB and m∠BPD.*
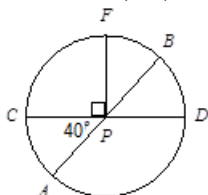
42. Find the area of sector and arc length. Give your answer in terms of π.

43. Find m∠x for the circles below.

44. Find *x*. Assume that segments that appear tangent are tangent.

45. Solve for x.

46. Solve for x.

47. Solve for x:

A.

B.