Geometry Name_____ ID: 1

Algebra 2 Summer Assignment

Date_____ Period____

This assignment is for students who have completed Geometry and are taking Algebra 2 in the 2018-2019 school year.

1) Did you read the instructions?

2) What math class are you taking in the 2018-2019 school year?

Simplify.

3) $\sqrt{800}$

4) $\sqrt{243}$

5) $7\sqrt{392}$

6) $7\sqrt{196}$

7) $9\sqrt{54}$

8) $8\sqrt{150}$

9) $2\sqrt{8} - \sqrt{24} + 3\sqrt{6}$

10) $3\sqrt{3} - 3\sqrt{2} + 3\sqrt{3}$

11) $-2\sqrt{27} - \sqrt{8} - 3\sqrt{3}$

12) $-2\sqrt{24} - 3\sqrt{45} - 3\sqrt{24}$

13) $\frac{\sqrt{10}}{2\sqrt{45}}$

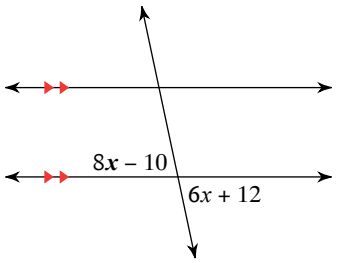
14) $\frac{4\sqrt{2}}{2\sqrt{4}}$

15) $\frac{2\sqrt{12}}{\sqrt{27}}$

16) $\frac{\sqrt{15}}{\sqrt{12}}$

Find the measure of the angle indicated in bold.

17)



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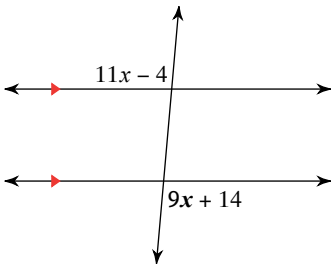

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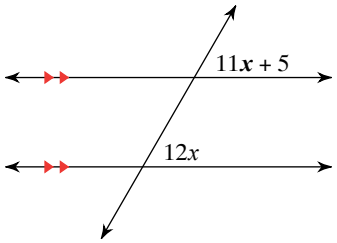
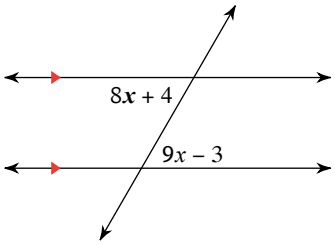


20)



Find the distance between each pair of points.

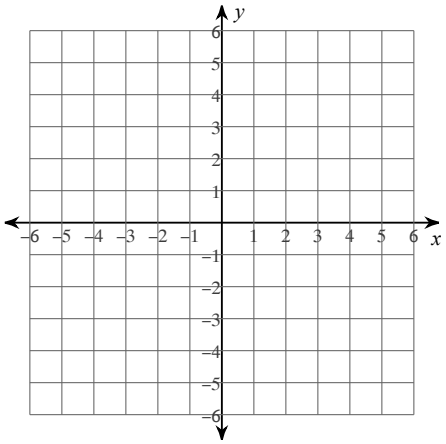
21) $(6, -3),\ (1, 1)$

Find the midpoint of the line segment with the given endpoints.

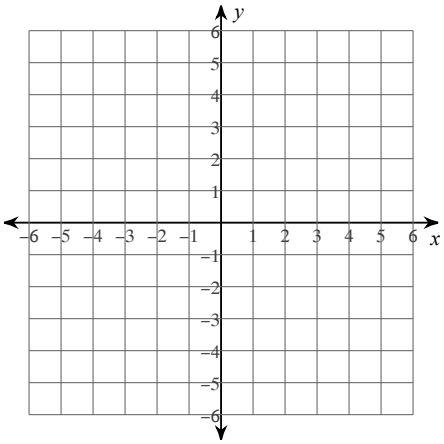
22) $(9, 6),\ (-5, 2)$

Sketch the graph of each line.

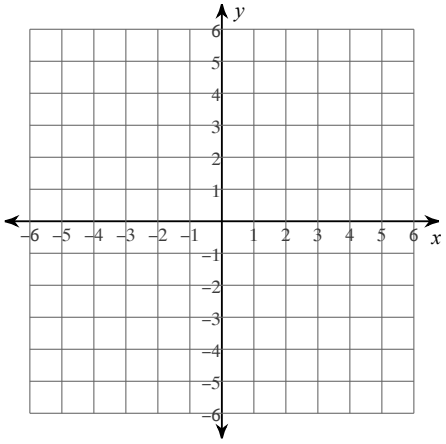
23) $0 = -3y - 2x - 12$



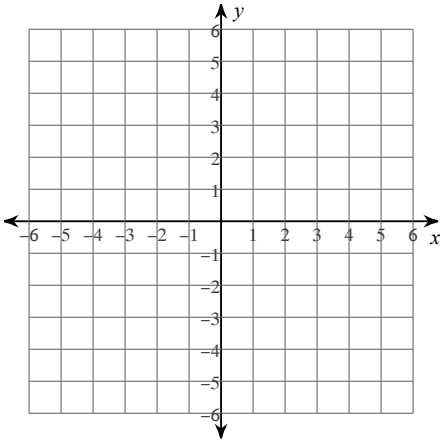
24) $-10y - 14x - 50 = 0$



25) $6 = -6y + 2x$

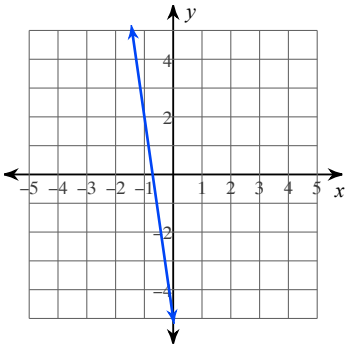


26) $-4 = -x$



Write the slope-intercept form of the equation of each line.

27)



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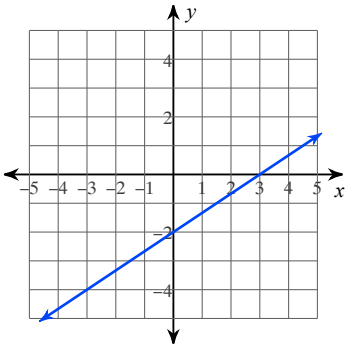


Write the slope-intercept form of the equation of the line described.

29) through: $(0, 5)$, parallel to $y = x + 2$

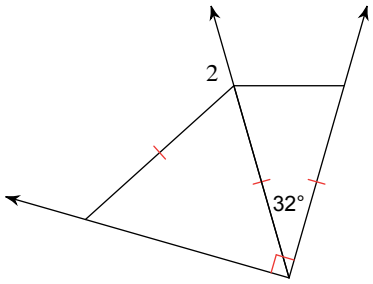
30) through: $(-5, 3)$, parallel to $y = -\frac{8}{5}x + 1$

31) through: $(0, 5)$, perp. to $y = -\frac{5}{3}x - 4$

32) through: $(1, -2)$, perp. to $y = -\frac{1}{3}x + 5$

Solve for *x*.

33) $m\angle 2 = x + 127$



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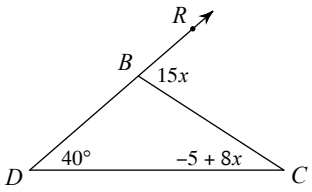
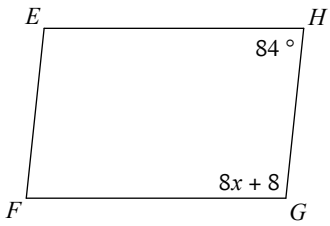


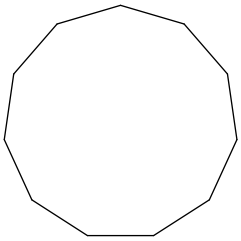
Solve for *x*. Each figure is a parallelogram.

35)



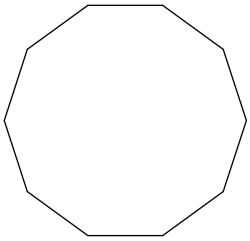
Find the measure of one interior angle in each regular polygon. Round your answer to the nearest tenth if necessary.

36)



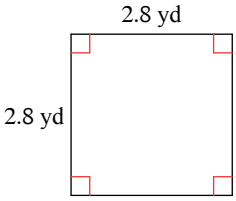
Find the measure of one exterior angle in each regular polygon. Round your answer to the nearest tenth if necessary.

37)



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

38)



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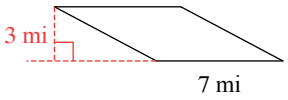

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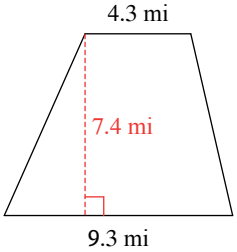

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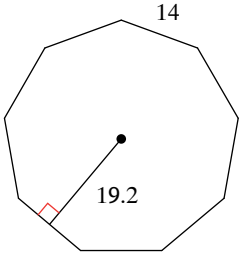

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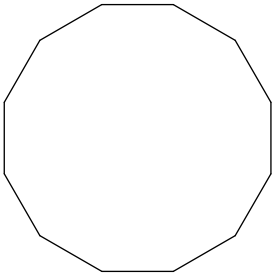
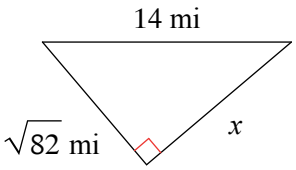


Perimeter = 24 km

Find the missing side of each triangle. Leave your answers in simplest radical form.

43)



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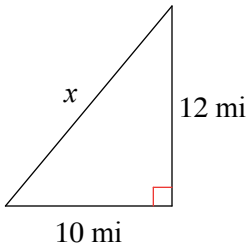


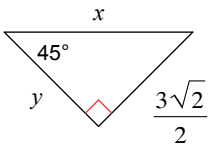
State if the three side lengths form an acute, obtuse, or right triangle.

45) 6 m, $2\sqrt{55}$ m, 19 m

46) $\sqrt{14}$ yd, $\sqrt{3}$ yd, 4 yd

Find the missing side lengths. Leave your answers as radicals in simplest form.

47)



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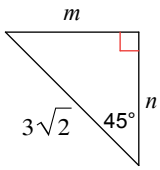

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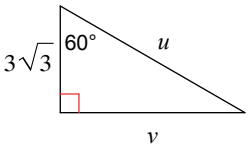

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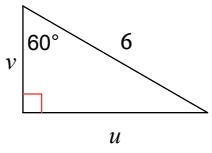

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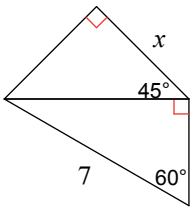
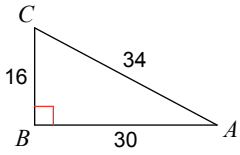
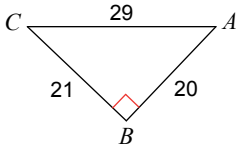


Find the value of each trigonometric ratio.

52) sin *A*

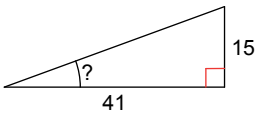


53) sin *A*

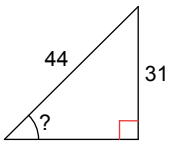


Find the measure of the indicated angle to the nearest degree.

54)

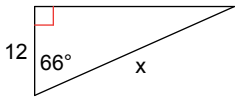


55)



Find the missing side. Round to the nearest tenth.

56)



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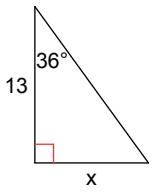
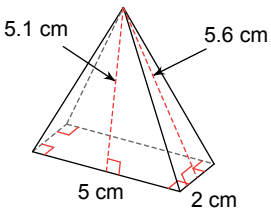


Find the surface area of each figure. Round your answers to the nearest hundredth, if necessary.

58)



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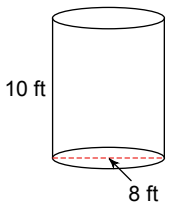

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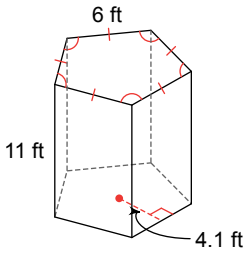

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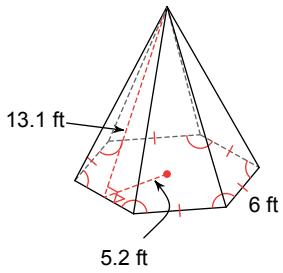
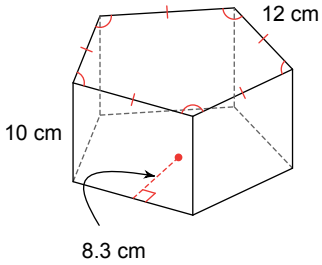


Find the volume of each figure. Round your answers to the nearest hundredth, if necessary.

62)



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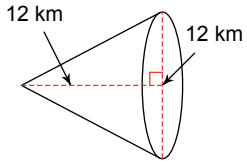

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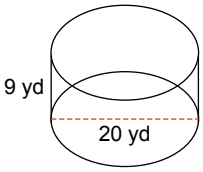
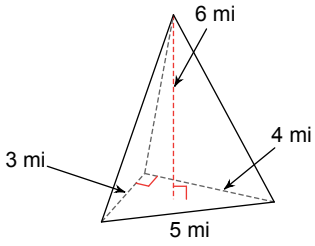
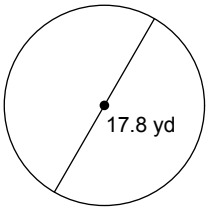


65)



Find the area of each. Use your calculator's value of π. Round your answer to the nearest tenth.

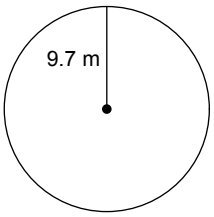
66)



67) circumference = 54.7 cm

Find the circumference of each circle. Use your calculator's value of π. Round your answer to the nearest tenth.

68)



69) area = 452.4 m²

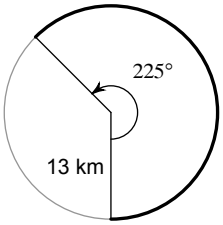
Find the radius of each circle. Use your calculator's value of π. Round your answer to the nearest tenth.

70) area = 314.2 in²

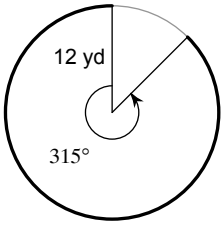
71) circumference = 66.6 mi

Find the length of each arc.

72)

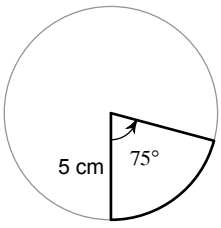


73)



Find the area of each sector.

74)



75)