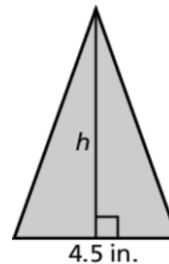


Summer Review

Entering Algebra-8

Solve.

1. $r - 3.4 = -5.8$
2. $-1 - 2c = 4$
3. One cell phone plan charges \$17.50 per month plus \$0.17 per minute used. A second cell phone plan charges \$32 per month plus \$0.07 per minute used. Write and solve an equation to find the number of minutes you must talk to have the same cost for both calling plans.
4. a. Write the formula for the area of a triangle. Then solve for h .
 b. The area of a triangle is 14.4 square inches. Use the new formula to find the height of the triangle in inches and in centimeters.



Answers

1. _____
2. _____
3. _____
4. a. _____

 b. _____

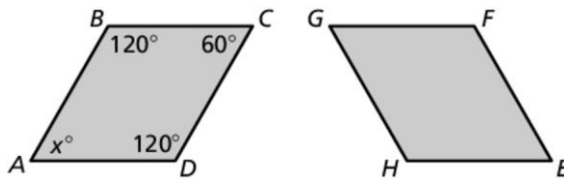
5. _____
6. _____
7. _____

8. _____

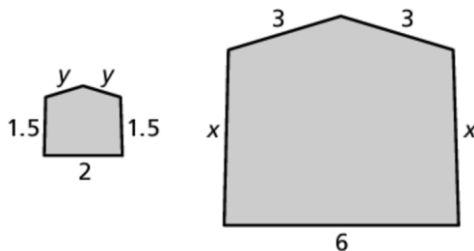
9. _____

In Exercises 5 and 6, use the following information.

Parallelograms $ABCD$ and $EFGH$ are congruent.



5. Which side of $EFGH$ is congruent to side BC ?
6. Find the measure of $\angle E$.
7. A triangle has vertices $A(-1, 3)$, $B(0, 2)$, and $C(-4, 0)$. Find the coordinates of the triangle after translating it down 3 units and reflecting it in the y -axis.
8. The two figures are similar. Find the values of x and y and the ratios (larger to smaller) of the perimeters and areas.

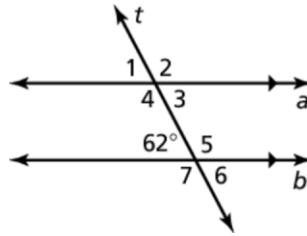


9. An original piece of artwork is 2.75 feet by 2.25 feet. A reprint of the artwork is 22 inches by 18 inches. Are the pieces similar? If so, what is the ratio of their corresponding side lengths?

Summer Review

Entering Algebra-8 (continued)

10. Use the figure to find the measure of $\angle 2$.



11. Find the measure of each angle of a regular polygon with 10 sides.

12. You want to determine if two triangles are similar. What is the minimum number of angles you need to measure to determine if the triangles are similar? Explain.

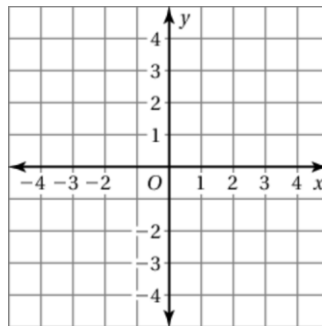
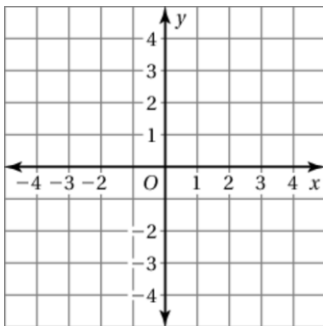
Answers

- 10. _____
- 11. _____
- 12. _____
- _____
- _____
- 13. _____
- _____

Find the slope and the y-intercept of the graph of the linear equation. Then sketch its graph.

13. $y = 1.5x + 1$

14. $3x + 5y = 1$



15. The equation $3.5x + 1.5y = 21$ represents the cost for a family to attend a play where x is the number of adults and y is the number of children. Find the intercepts and interpret the meaning of each one.

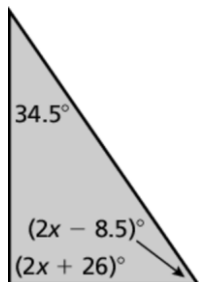
- 14. _____
- _____
- _____
- _____
- 15. _____
- _____
- _____
- _____
- 16. _____
- 17. _____
- 18. _____

Write an equation of the line in slope-intercept form.

16. the line passing through $(0, 2)$ and $(1, -1)$

17. the line with slope -2 and passing through $(3, 1)$

18. Find the value of x .



Summer Review

Entering Algebra-8 (continued)

Solve the system.

19. $y = \frac{3}{2}x + 2$
 $y - \frac{1}{2}x = \frac{1}{2}$

20. $y - \frac{4}{3}x = 2.5$
 $3y = 4x - 2$

21. $y = \frac{1}{2}x - 2$
 $x + 2y = 2$

22. It costs \$0.07 to send a text message and \$0.12 to send a picture on your cell phone. You spend \$3.38 and send twice as many text messages as pictures. How many text messages did you send?

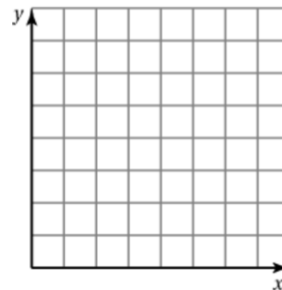
23. Draw a mapping diagram of the set of ordered pairs.

$(0, 1), (2, 5), (4, 1), (3, 2)$

24. The table shows the cost y (in dollars) of x peaches.

Peaches, x	0	4	8	12
Cost, y	0	3	6	9

- a. Graph the data.
- b. Write a linear function that relates y to x .
- c. What is the cost of six peaches?



Does the equation or table represent a *linear* or *nonlinear* function?

25. $\frac{2}{3}x - \frac{1}{2}y = 4$

26.

x	1.5	3.5	5.5	7.5
y	1	2	4	8

Answers

19. _____

20. _____

21. _____

22. _____

23. See left.

24. a. See left.

b. _____

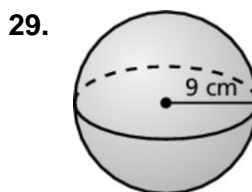
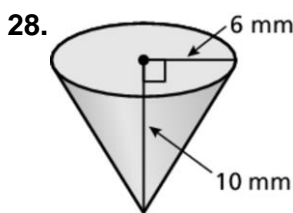
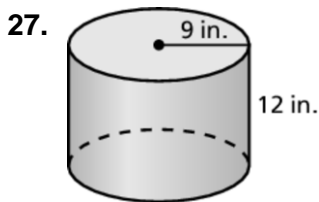
c. _____

25. _____

26. _____

Summer Review Entering Algebra-8 (continued)

Find the volume of the solid. Round your answer to the nearest tenth. **Answers**



27. _____

28. _____

29. _____

30. _____

31. _____

32. _____

33. **See left.**

34. **See left.**

35. _____

36. _____

37. _____

38. _____

39. _____

40. _____

41. _____

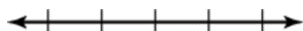
30. 3.2 less than a number t is at most 7.5.

31. A number m multiplied by $\frac{4}{7}$ is greater than $\frac{12}{5}$.

32. You and three friends are making a gift basket. You want to keep the cost below \$12 per person. Write and solve an inequality that represents the total cost of the gift basket.

Solve the inequality. Graph the solution.

33. $k + 10 \leq 6$



34. $-5v > -10$



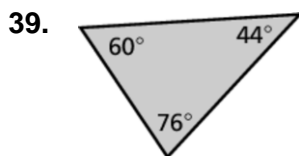
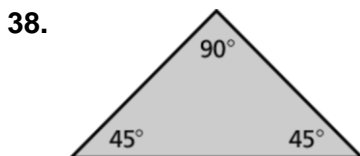
35. If you spend at least \$50 (including shipping) at an online store, you receive a \$10 gift card. You want to buy CDs that cost \$12.50 each. If shipping costs \$5, write and solve an inequality to find the number of CDs you must buy to receive the gift card.

Classify the angles as complementary, supplementary, or neither.

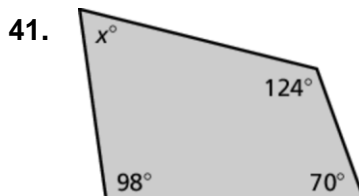
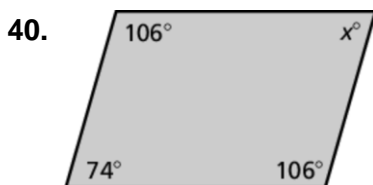
36. $18.5^\circ, 71.5^\circ$

37. $134.2^\circ, 55.8^\circ$

Classify the triangle.

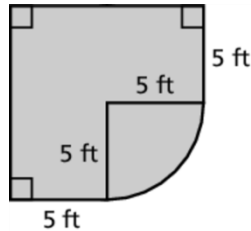


Find the value of x .

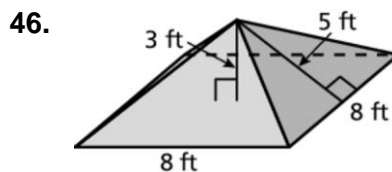
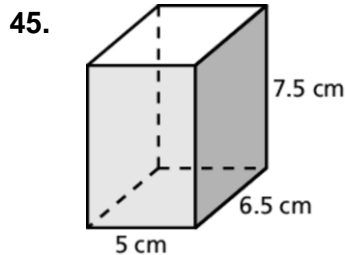


Summer Review **Entering Algebra-8** (continued)

42. A scale drawing has a scale of 5 mm : 1 cm. What is the scale factor?
43. The diameter of a circle is 28 inches. Find the circumference and area. Use $\frac{22}{7}$ for π .
44. Find the area of the figure. Use 3.14 for π .



Find the volume and surface area of the solid.



47. Find the surface area of the cylinder with a radius of 2 inches and a height of 6.5 inches. Round your answer to the nearest tenth.
48. A manufacturer wants to make a box with a volume of 72 cubic feet.
- Sketch two possible designs for the box.
 - If the box is to be made out of wood that costs \$4 per square foot, which of your designs would be less expensive to produce? Explain.
49. The theoretical probability that you will participate in Track and Field is $\frac{2}{7}$. There are about 344 students in your grade. About how many students in your grade will participate in Track and Field?
50. You have 10 cards numbered from 1 to 10. You choose a card at random. Then without replacing the first card, you choose another card at random. What is the probability that you choose two even numbers?

Answers

42. _____
43. _____
44. _____
45. _____
46. _____
47. _____
48. a. See left.
- b. See left.
49. _____
50. _____

You roll a number cube twice. Find the probability of the event.

Answers

51. Rolling a 1 then a 2

51. _____

52. Rolling an odd then an even

52. _____

53. The probability that your ticket will be chosen in a drawing is 16%. There are 125 tickets in the drawing. How many tickets are yours?

53. _____