Algebra 1 Summer Work

Solve using the four-step plan.

1. Franco stayed at a hotel for 4 nights. The hotel room cost $85 per night. He had a coupon for $5 off his total bill. How much did Franco pay the hotel?

Name the sets of numbers to which each number belongs.

2. $\sqrt{9}$

Find the square root. If necessary, round to the nearest hundredth.

3. $-\sqrt{67.24}$

4. Write the set of numbers in order from greatest to least.
$\sqrt{41}$, 3.9, $\sqrt{3.9}$

Find the product.

5. 8(11)(4)

Replace the __ with the symbol that makes a true sentence.

6. $1\frac{1}{4}$ __ 1.9090909091

Find the product. Round to the nearest hundredth if necessary.

7. $1\frac{1}{6} \cdot 5\frac{3}{10}$

Use the percent proportion to find the number. Round to the nearest tenth, if necessary.

8. Find 55% of 60.

9. 37 is what percent of 58?

Find the perimeter.

10. A parallelogram with side lengths of 22 inches and 18 inches.

Find the circumference. Round to the nearest tenth.

11. A circle with a diameter of 3 cm.

Find the area.

12. A parallelogram that has a base of 19 inches and a height of 22 inches.

Find the volume of the rectangular prism.

13. $l = 8$ ft, $w = 8$ ft, $h = 6$ ft

Find the surface area of the rectangular prism.

14. $l = 3$ cm, $w = 6$ cm, $h = 4$ cm

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Find the probability.

15. A coin is randomly selected from a jar containing 14 nickels, 12 dimes, and 21 quarters. Find *P*(nickel). Round to the nearest percent if necessary.

16. Suppose five different boats sail from Kauai to Oahu. Those same boats plus three more boats travel from Oahu to Maui. There are no direct routes from Kauai to Maui. How many ways can a tourist sail from Kauai to Maui?

17. How many outfits are possible if you choose one each of nine shirts, three pairs of shorts, and five pairs of shoes.

Find the median. Round to the nearest tenth if necessary.

18. 30, 28, 24, 17, 31, 21, 26, 40

19. Find the lower quartile and upper quartile.
    5, 5, 13, 21, 27, 36, 58, 63, 71, 72, 74, 82, 86

20. Draw a box-and-whisker plot for the set of data.

    27, 35, 44, 51, 52, 54, 56, 69, 69, 79, 80, 100, 100

Solve using the four-step plan.

21. A gallon of milk costs $3.95. A family drinks 2 gallons of milk a week. About how much does the family spend on milk in a year?

22. A deli sells Swiss cheese for $7.95 a pound. Amy asked for 2 pounds sliced very thin. The scale read 1.95 lbs. About how much did Amy have to pay for the cheese?

23. A given square has an area of 64 units^2. The area of the unshaded portion is 60 units^2. Find the side length of the smaller square.
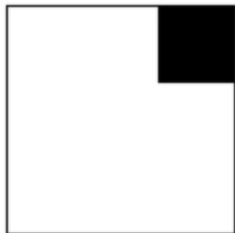
Solve for the situation.

24. A pizza restaurant mailed out 1,000 coupons for $2.50 off a large specialty pizza. By the time the coupon expired, 175 of the coupons had been redeemed for delivery and another 35 were redeemed at the restaurant. What was the total amount of discounts provided by the restaurant's coupon mailing?

Solve for the situation.

25. A magician had a volunteer from his audience cut ten 8-inch pieces from a long rope. He put the pieces into his hat and magically pulled out the original rope intact. How many feet long was the rope?

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Solve for the situation.

26. Two congruent squares with side lengths of 4 inches share a side to form a rectangle. What is the perimeter of the rectangle?

Solve for the situation.

27. A housing developer bought a rectangular piece of land. They divided the land into 10 square lots. Each lot has a side length of 50 yards. What is the total area of the land that the developer bought?

Solve for the situation.

28. A 15 cubic-foot aquarium is advertised as 2 feet tall and 3 feet wide. How deep is it?

Solve for the situation.

29. The chart shows the number of customers an auto repair shop had last week. Find the mean, median and mode.

Day	Number of Customers
Monday	10
Tuesday	15
Wednesday	14
Thursday	15
Friday	9
Saturday	19

30. Explain two methods of comparing two fractions with unlike denominators.

Solve for the situation.

31. The stem-and-leaf plot shows the weight in pounds of all the dogs in a dog show. Do more dogs weigh less or more than 50 pounds?

Stem	Leaf
2	0 0 2 4 6
3	2 3 7 8 8 9
5	1 1 1 3 5
6	6 8 9 9
8	1

Find the square root. If necessary, round to the nearest hundredth.

32. $\pm\sqrt{\dfrac{144}{196}}$

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Evaluate the expression.

33. $-2 + 2(3)^2(5) + 4$

34. Evaluate the following expression if $a = 9$, $b = 3$, and $c = 7$.

$3c + bc - 2a$

35. If $g(x) = x^2 + 5x - 4$, find $g(-1)$.