

**ALGEBRA 1
SUMMER ASSIGNMENT**

Use the four step problem solving process to solve.

- 1). While on vacation, the Jacobson family drove 312.8 miles the first day, 177.2 miles the second day, and 209 miles the third day. About how many miles did they travel in all?
- 2). Ms. Hernandez boarded her dog at a kennel for 4 days. It cost \$18.90 per day, and she had a coupon for \$5 off. What was the final cost for boarding her dog?

Identify the set or sets to which each real number belongs. Circle all that apply.

- | | | |
|------------------|--------------------|----------------------------|
| 3). $-\sqrt{64}$ | 4). $\frac{56}{7}$ | 5). $\sqrt{\frac{82}{20}}$ |
| a. rational | a. rational | a. rational |
| b. irrational | b. irrational | b. irrational |
| c. natural | c. natural | c. natural |
| d. whole | d. whole | d. whole |
| e. integer | e. integer | e. integer |

Simplify the square root. Write your answer as a fraction.

- | | | |
|----------------------------|------------------------------|-----------------------------|
| 6). $\sqrt{\frac{16}{49}}$ | 7). $\sqrt{\frac{169}{196}}$ | 8). $\sqrt{\frac{25}{324}}$ |
|----------------------------|------------------------------|-----------------------------|

Order the numbers from least to greatest.

- 9). $\{-3.5, -\frac{15}{5}, -\sqrt{10}, -3\frac{3}{4}\}$
- 10). $\{\sqrt{64}, 8.8, \frac{26}{3}, 8\frac{2}{7}\}$

Find each sum or difference and write in simplest form. You MUST show your work.

11). $79.3 - (-14)$

12). $1.34 - (-0.458)$

13). $-\frac{1}{12} - (-\frac{3}{4})$

14). $-\frac{7}{8} - (-\frac{3}{16})$

15). Joe said the absolute value of -43 is 43 . Is he correct? Explain.

Name the reciprocal.

16). $-\frac{14}{23}$

17). $2\frac{3}{4}$

Find the product or quotient in simplest form. You MUST show all steps.

18). $\frac{1}{3} \bullet \frac{6}{5}$

19). $\frac{2}{7} \bullet 4\frac{2}{3}$

20). $\frac{1}{2} \div \frac{3}{5}$

21). $-\frac{1}{3} \div (-1\frac{1}{5})$

Use the percent proportion to find each number.

22). 25 is what percent of 125?

23). 14 is 20% of what number?

24). What number is 25% of 18?

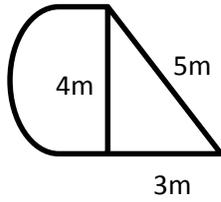
25). 5% of what number is 3.5?

26). Find the perimeter of a parallelogram with side lengths $6\frac{1}{4}$ inches and 5 inches.

27). A rectangular room is $12\frac{1}{2}$ feet wide and 14 feet long. What is the perimeter of the room?

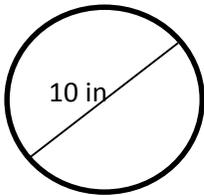
Find the perimeter. Round to the nearest tenth.

28).

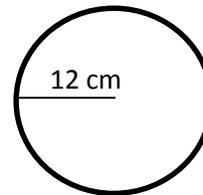


Find the circumference. Put in terms of π .

29).



30).



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

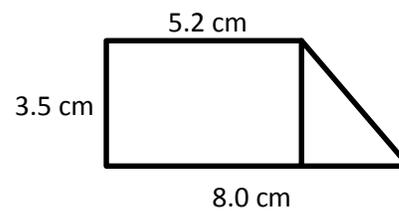
31). A triangle with a base 12 millimeters and height 11 millimeters.

32). A square with side length 9 feet.

33). A circle with the radius 4 centimeters.

34). A circle with the diameter 25 feet.

35).



Find the volume of the figures. Round to the nearest tenth, if necessary.

- 36). A rectangular prism length: 13 ft, width: 9 ft, height: 12 ft.
- 37). A cylinder with a radius 12.2 cm and height 12.2 cm.
- 38). A cylinder with a diameter 14 in and height 18 in.
- 39). An aquarium is 8 feet long, 5 feet wide, and 5.5 feet deep. What is the volume of the aquarium?
- 40). The volume of a rectangular prism is 440 cubic centimeters, the height is 11 centimeters, and the length is 10 centimeters. What is the width?

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

- 41). A rectangular prism with length: 6 in, width: 1 in, height: 4 in.
- 42). A rectangular prism with length: 10 mm, width: 4 mm, height: 5 mm.
- 43). A cylinder with radius: 4.5 in and height: 12.5 in.
- 44). A cylinder with radius 5.1 cm and height 6.2 cm.

One coin is randomly selected from a jar containing 70 nickels, 100 dimes, 80 quarters, and 50 one-dollar coins. Find each probability.

45). $P(\text{quarter})$

46). $P(\text{quarter or nickel})$

47). $P(\text{value less than } \$1)$

Find the odds of each outcome if a computer randomly picks a letter in the name THE UNITED STATES OF AMERICA.

48). The letter A

49). A vowel

50). A consonant

Find the mean, median, mode, and range for the data set. Label each answer.

51). Car speeds in miles per hour observed by a highway patrol officer: 60, 53, 53, 52, 53, 55, 55, 57

Find the minimum, lower quartile, median, upper quartile, and maximum values for each data set. Label each answer.

52). Prices in dollars of smartphones: 311, 309, 312, 314, 399, 312

53). Attendance at an event for the last nine years: 68, 99, 73, 65, 67, 62, 80, 81, 83

54). Use the set of data to make a stem-and-leaf plot AND a box-and-whisker plot. Describe how the outliers affect the quartile points. Show your calculations when preparing to make the box-and-whisker plot.
{65, 63, 69, 71, 73, 59, 60, 70, 72, 66, 71, 58}

- 57). The table shows the number of miles Hannah jogged each day for 10 days. Make a line graph of the data. Do this on graph paper.

Day	1	2	3	4	5	6	7	8	9	10
Miles Jogged	2	2	3	3.5	4	4.5	2.5	3	4	5

- 58). Explain how to determine the number of degrees for the sectors of a circle graph.