hw-08-word-problems

Students will be able to:

- Solve Basic Number/Money and Geometric Application Problems
- Solve Uniform Motion Application Problems
- Solve Simple Interest Application Problems
- Solve Mixture Application Problems
- Solve Work Rate Application Problems

Functions and symbols that WeBWorK understands.

Links to some useful WeBWorK pages for students

1. (1 pt) 185 is what percent of 500?.

Your answers is : _____ percent.

2. (1 pt) What is 35 percent of 180?.

Your answers is : _____

3. (1 pt) 270 is 20 percent of what number?

Your answers is : _____

4. (1 pt) **This exercise concerns with modeling with linear equations.**

One positive number is one-fifth of another number. The difference between the two numbers is 288, find the numbers.

The two numbers in increasing order are _____ and _____

5. (1 pt) The oldest child in a family of four children is twice as old as the yougest. The two middle children are 13 and 16 years old. If the average age of the children is 14.75, how old is the youngest child?

Your answer is : _____

6. (1 pt) A rectangular room is 1.5 times as long as it is wide, and its perimeter is 33 meters. Find the dimension of the room.

The length is : _____ meters and the width is _____ meters.

7. (1 pt) A rectangular room is 1.6 times as long as it is wide, and its perimeter is 27 meters. Find the dimension of the room.

The length is : _____ meters and the width is _____ meters.

8. (1 pt) A Norman window has the shape of a rectangle surmounted by a semicircle. If the perimeter of the window is 20.700 ft. give the area A of the window in square feet when the width is 4.200 ft. Give the answer to two decimal places.

_____

9. (1 pt) Two cyclists, 80 miles apart, start riding toward each other at the same time. One cycles 3 times as fast as the other. If they meet 2 hours later, what is the speed (in mi/h) of the faster cyclist?

_____

10. (1 pt) After robbing a bank in Dodge City, a robber gallops off at 13 mi/h. 30 minutes later, the marshall leaves to pursue the robber at 16 mi/h. How long (in hours) does it take the marshall to catch up to the robber?

_____

11. (1 pt) John wants to get to the bus stop, the bus stop is across a grassy park, 2000 feet west and 600 feet north of his starting position. John can walk west along the edge of the park on the sidewalk at a speed of 6 ft/sec and 4 ft/sec through the grass. How far should he walk on the sidewalk before veering off onto the grass if he wishes to get to the bus stop in exactly 7 min 30 sec?

Answer: _____

12. (1 pt) Phyllis invested 69000 dollars, a portion earning a simple interest rate of 4 percent per year and the rest earning a rate of 6 percent per year. After one year the total interest earned on these investments was 3440 dollars. How much money did she invest at each rate?

At rate 4 percent : _____
At rate 6 percent : _____

13. (1 pt) What quantity of 70 per cent acid solution must be mixed with a 20 solution to produce 800 mL of a 50 per cent solution?

_____

14. (1 pt) The radiator in a car is filled with a solution of 75 per cent antifreeze and 25 per cent water. The manufacturer of the antifreeze suggests that for summer driving, optimal cooling of the engine is obtained with only 50 per cent antifreeze. If the capacity of the raditor is 4.7 liters, how much coolant (in liters) must be drained and replaced with pure water to reduce the antifreeze concentration to 50 per cent?

_____

15. (1 pt) A cash register contains only five dollar and ten dollar bills. It contains twice as many five's as ten's and the total amount of money in the cash register is 720 dollars. How many ten's are in the cash register?

_____

16. (1 pt) A change purse contains an equal number of pennies, nickels, and dimes. The total value of the coins is 352 cents. How many coins of each type does the purse contain?

Number of pennies : _____

17. (1 pt) Your weekly paycheck is 15 percent less than your coworker's. Your two paychecks total 645. Find the amount of each paycheck.

Your coworker's is : _____ and yours is _____.

18. (1 pt) An executive in an engineering firm earns a monthly salary plus a Christmas bonus of 7200 dollars. If she earns a total of 84800 dollars per year, what is her monthly salary in dollars?

Your answer is : _____

19. (1 pt) Stan and Hilda can mow the lawn in 25 min if they work together. If Hilda works twice as fast as Stan, how long would it take Stan to mow the lawn alone?

Give your answer in munites here: _____

20. (1 pt) Mutt and Jeff need to paint a fence. Mutt can do the job alone 3 hours faster than Jeff. If together they work for 35 hours and finish only $\frac{3}{4}$ of the job, how long would Jeff need to do the job alone?

Your answer must be a number. No arithmetic operations are allowed.

It would take Jeff _____ hours to do the job alone.

21. (1 pt) A jeweler has three small solid spheres made of silver, of radius 5 mm, 2 mm, and 5 mm. He decides to melt these down and make just one sphere out of them. What will the radius of this larger sphere be?

Answer: _____