

One point per problem

1. A circular flower bed is 6 m in diameter and has a circular sidewalk around it 1 m wide. Find the exact area of the sidewalk in square meters.
2. A rectangular cabinet has the dimensions 12" by 20" by 5". What is the volume of the cabinet to the nearest tenth of a cubic foot?
3. A group of students held a car wash to raise money. They charged \$3.25 for cars and \$4.75 for trucks. They washed 78 cars and 34 trucks. If they spent \$18.00 on supplies, how much profit did they make?
4. Given the following clues what is this mystery number: 0.____ ?
Each digit is unique.
The digit in the hundredths place is 3 times the digit in the tenths place.
The sum of all three digits is 10.
The sum of the tenths and thousandths place is 7.
5. If d, e, f, and g each stand for a different single digit number from 1-9, what is the only possible value for f ?

$$\begin{array}{r} d \\ + e \\ \hline fg \end{array}$$
6. The sum of two numbers is 61, and when the digits in each of the numbers are reversed, their sum is 115. Find the two numbers.
7. If 467, __2 is divisible by 144, then what two digits go in the blanks.
8. If you have a bunch of \$0.06 and \$0.05 stamps and a package for which postage is \$1.93, and your total number of stamps is 33, then how many stamps of each kind will you need to mail the package?
9. Sunflower seeds are sold in packages that weigh $3\frac{1}{4}$ ounces. If there is a supply of 66 ounces of sunflower seeds, how many full packages of seed can be made?
10. Simplify $\frac{5\frac{1}{2} - 3\frac{1}{4}}{8\frac{3}{4} + 10\frac{1}{2}}$, and express it as a fraction in simplified form.

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11. An analysis of freshmen at a college revealed that $\frac{1}{4}$ of the freshman women were from homes where both parents were professionals. Of these, $\frac{3}{5}$ were interested in the same profession as one or both of their parents. If this latter group is made up of 18 students, how many freshman women are there?
12. For 6 consecutive years, Joan's age was divisible by her granddaughter's age. The first year the sum of their ages was 62. The last year, Joan was 11 times older than her granddaughter was. What were their ages the third year?
13. What is the units digit of 3^{900} ?
14. Find the sum of all whole numbers from 50 to 100.
15. A map is drawn to scale such that $\frac{2}{5}$ in. represents 60 ft. If the shortest route from your house to the school measures 15 in., how many miles, to the nearest hundredth of a mile, is it from your house to the school?

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1. _____ square meters
2. _____ cubic feet
3. \$_____ profit
4. 0. _____
5. $f =$ _____
6. _____, _____
7. 467, _____ 2
8. _____ 6 cent stamps
_____ 5 cent stamps
9. _____ packages
10. _____

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11. _____ freshman women
12. Joan's age _____
granddaughter's age _____
13. _____
14. _____
15. _____ miles