



Workout MN

1. _____ cm^2 A design with four circles and four semi-circles is drawn for a logo. The radius of each of the circles is 6cm, and the radius of each of the semi-circles is $\frac{1}{2}$ of that. What is combined the area of circles and semicircles in the logo? Express your answer in terms of pi.
2. _____ If a painted cube is cut into 27 identical smaller cubes, how many of the resulting cubes will have paint on exactly one face?
3. _____ hrs A volcano erupts, and the lava flows at a constant rate of 7 mph in all directions from the center of the volcano. Bob is six miles away and is running at a constant rate of 5 mph from the volcano. How many hours will it take for the lava catch up with him?
4. _____ There is a set of buttons in four colors; red, blue, yellow, and green. Red and blue buttons make up 30% of the total amount. Blue and yellow buttons make up 40% of the total amount. The number of yellow buttons is the same as the percent of yellow buttons, and is one more than twice the number of blue buttons. How many green buttons are there?
5. _____ ft  An elephant's body length is three times its head length, and its head length is $\frac{1}{2}$ its tail length. Its tail length is 3 ft. What is the combined length of its body, head, and tail?
6. _____ cents At Wal-Mart, a 12 pack of soda is on sale for \$7.99. At Walgreen's, a 16 pack of soda is on sale for \$12.99. To the nearest cent, how much will you save per can at the store with the cheaper price?
7. _____ \$ In Mathville, taxes used to be 10% of a person's annual income. Last year, that percent increased to 15%. Bob earns \$29,880 each year. By how much was his tax increased when the rate changed from 10% to 15%?
8. _____ Albert, Bob, Charlie, Donald, and Egbert each collect comic books. Albert has 1 comic book, Bob has 3 comic books, Charlie has 7, and Donald has 15. If the pattern continues, how many comic books does Egbert have? 
9. _____ % Billy is having dinner. His plate is $\frac{1}{3}$ full of macaroni, $\frac{1}{4}$ full of chicken, and $\frac{1}{6}$ full of peas. How much room is left on his plate for dessert? Express your answer as a percent.
10. _____ % Mrs. Clover's class took a spelling test. The boy's test average was 90%. The girl's average was 93%. If there are 10 boys and 12 girls in Mrs. Clover's class, what is the spelling test average of the whole class? Express your answer as a percent rounded to the tenth.