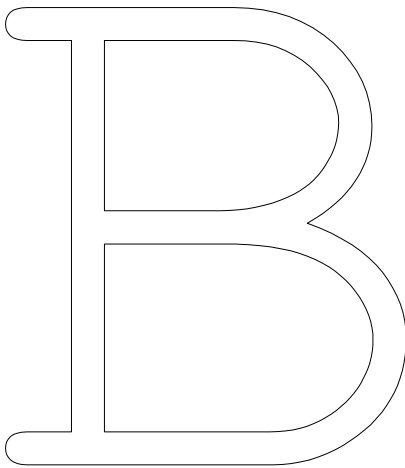


REMT 2005

ANSWERS



1. _____
2. _____
3. _____
4. _____
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9. _____
10. _____
11. _____
12. _____
13. _____
14. _____
15. _____

CALCULATIONAL

COMPUTATION

LAST NAME

FIRST NAME

GRADE

Be sure to write each of your answers on the answer sheet.

1. The sum of the integers from 1 to 100 is 5050. What is the sum of the odd integers from 1 to 99?
2. What is the remainder when 6789 is divided by 1234?
3. What number is $\frac{7}{9}$ of the way from 300 to 498?
4. What is the exact value of $\sqrt[3]{49\frac{8}{27}}$?
5. The number 100 has nine distinct positive integer divisors. What is the sum of all these divisors?

6. The sum of two numbers is 10 and their product is $4\frac{3}{4}$. What is the larger of these two numbers?
7. Solve the equation $a = \frac{b+1}{b+2}$ for b in terms of a .
8. Simplify as much as possible the expression: $\frac{2x^2 - 3x - 2}{2x^2 + 7x + 3}$.
9. Simplify as much as possible the expression: $\frac{1}{\sqrt{x}-2} - \frac{\sqrt{x}}{x-4}$.
10. Pat just bought a new portable MP3 player. The total cost, including $7\frac{1}{2}\%$ tax, was \$67.08.
What was the price of the MP3 player, without the tax?

11. Jane just won a contest in which the prize is equal to her weight in new U.S. nickels. If 17 of these nickels weighs 3 ounces, and if Jane weighs 90 pounds, how many dollars did she win?



12. A certain number, when subtracted from its own cube, leaves a difference of $13\frac{1}{8}$. What is this number?

13. P is inversely proportional to the square of Q. If $P = 5$ when $Q = 2$, what is P when $Q = 6$?

14. A ship leaves port at noon and sails at a constant speed of 12 knots. A second ship leaves the same port two hours later and sails on the same course at a speed of 15 knots. At what time will the second ship overtake the first?

15. Tickets for the school play cost \$3.50 for students and \$5.00 for adults. We sold 120 tickets altogether and took in \$501. How many adult tickets were sold?