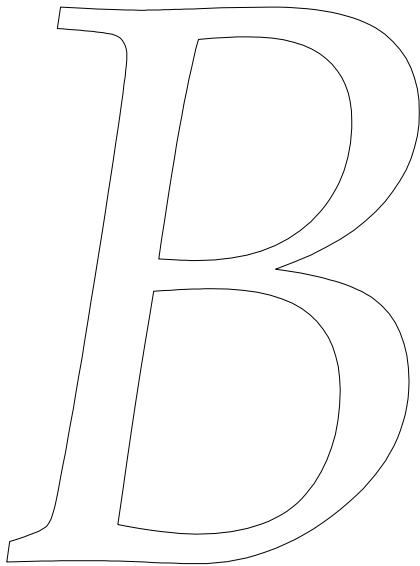


REMT 2007

ANSWERS



- 1. _____
- 2. _____
- 3. _____
- 4. _____
- 5. _____
- 6. _____
- 7. _____
- 8. _____
- 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. I have \$22.75 in pennies, nickels, dimes, quarters, and half-dollars. If I have an equal number of coins of each kind, how many coins do I have altogether?
2. A certain positive number minus its reciprocal is equal to $\frac{5}{6}$. What is this number?
3. If we start adding the positive integers together: $1+2+3+\dots$, and continue until the sum exceeds 1000, what was the last integer we added?
4. Light travels at a speed of 186,000 miles per second. The sun is 93,000,000 miles from earth. How long, in minutes and seconds, does it take light from the sun to reach the earth?
5. If a megabyte is 2^{20} bytes, and a gigabyte is 2^{30} bytes, and if a music file can store one minute of music per megabyte, how many hours of music can I store on my 30 gigabyte portable media player?

6. Find the value of x in the solution to the system:
$$\begin{aligned} 2x + 3y &= 1 \\ 4x - 5y &= 24 \end{aligned}$$
7. The equation $x^4 - 8x^2 + 15 = 0$ has four solutions. What is the exact value of the largest of these solutions?
8. What number should be added to the expression $x^2 + 5x$ in order to obtain an expression that is a perfect square?
9. In the following expression, replace x by $1/x$ and simplify as much as possible: $\frac{3x+1}{2x+3}$.
10. Simplify as much as possible the expression: $\frac{x^5 y z^4}{x^3 y^{-2} z^0}$.

11. Simplify as much as possible the expression: $\frac{2x^2 + x - 1}{2x^2 - 5x + 2}$.
12. Simplify as much as possible the expression: $\frac{1}{2 - \sqrt{x}} - \frac{\sqrt{x}}{4 - x}$.
13. Solve for x in the equation $\frac{3}{x} + \frac{1}{2} = \frac{4}{3}$.
14. Solve the equation $a = \frac{2b+1}{b-1}$ for b in terms of a .
15. P is inversely proportional to Q . If P is 6 when Q is 35, what is P when Q is 15?