

Do the Math!
Faites les maths!
2011

$$\frac{(x+y)^2 - (x-y)^2}{xy} = \frac{[(x+y) + (x-y)][(x+y) - (x-y)]}{xy} = \frac{(2x)(2y)}{xy} = 4$$
$$\frac{(3.1 \times 10^7)(8 \times 10^5)}{2 \times 10^3} = \frac{3.1 \times 8}{2} \times \frac{10^7 \times 10^5}{10^3} \approx 3.1 \times 4 \times 10^{7+5-3} = 12.4 \times 10^9$$



Canadian Open Mathematics Challenge

Wednesday, November 2, 2011

Study Topics

Most of the problems on the 2011 COMC will be based on the mathematics curriculum taught in secondary schools and CEGEPs. Some questions require a degree of understanding beyond the curriculum. Potential topics include:

- Euclidean and analytic geometry
- Trigonometry, including functions, graphs, identities, sine and cosine laws
- Exponential and logarithmic functions
- Functional notation
- Systems of equations
- Polynomials, including relationships involving the roots of quadratic and cubic equations
- The remainder theorem
- Sequences and series
- Simple counting problems
- The binomial theorem
- Elementary number theory, including tests for divisibility, number of divisors, and simple Diophantine equations

Visit cms.math.ca/Competitions/COMC/ for more information



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