

BRONX COMMUNITY COLLEGE
of the City University of New York

DEPARTMENT OF MATHEMATICS AND COMPUTER SCIENCE

MATH 05
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Quiz 2
February 14, 2006

Name: _____

Secret Name: _____

Directions: You *must* show all your work in the provided space. Simplify your answers whenever possible. Be certain to indicate your final answer clearly.

1. Consider the following shape:

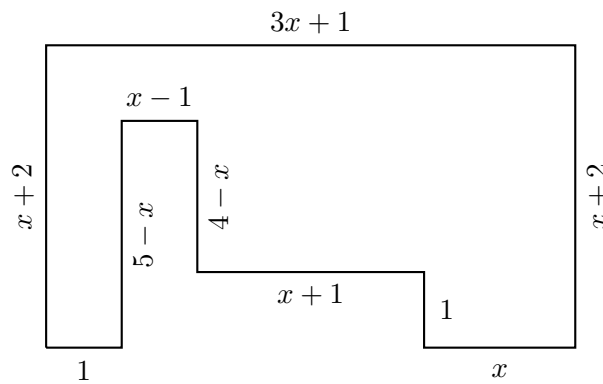


Figure 1: The shape

- (a) Find an algebraic expression that represents the *perimeter* of the shape.
- (b) Find the perimeter if $x = 2$ cm.

2. Subtract $x^2 + 2x^2y - 3xy$ from $5x^2 + 4y^2 - 4x^2y - 5xy$.

3. Evaluate each of the following expressions if $a = -2$, $b = 3$, $x = -1$, $y = 1$ and $z = 2$:

(a) $5b - 3a + 7z$

(b) $-a^2 + (-b)^2$

(c) $a^3 - z(x - y) + b^2$

(d) $\frac{(a + x)^2}{z + y^2}$

(d) $|-x - b^2|$

(e) $\frac{a - 2x}{by + z}$

4. Consider the intervals $(-3, 2]$ and $[1, 5]$. Graph them in the same axis and find their *union* and their *intersection*.

