The Workshop Project Newsletter

PROGRESSIONS:
PEER-LED TEAM LEARNING

Volume 7, Issue 2

Winter 2006

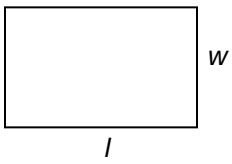
Module 7: Polynomials

Objectives

- To review area and perimeter of geometric shapes
- To add, subtract, multiply and divide polynomials using geometric shapes

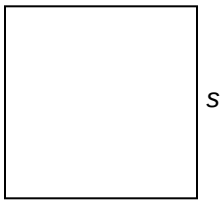
Formulas for Area and Perimeter

Rectangle



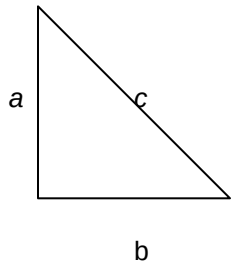
Perimeter: P = 2*l*+2*w*
Area: A = *l w*

Square



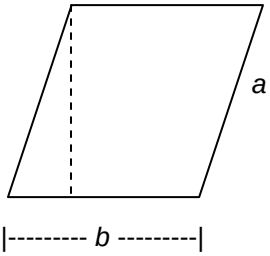
Perimeter: P = 4*s*
Area: A = s^2

Right Triangle



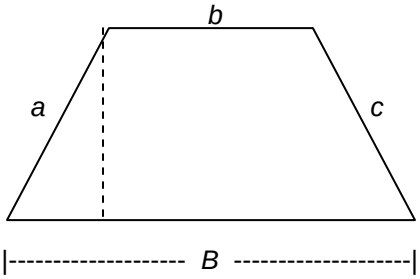
Perimeter: P = *a* + *b* + *c*
Area: A = ½ *a b*

Parallelogram



Perimeter: P = 2*a*+2*b*
Area: A = *b h*

Trapezoid



Perimeter:: P = *a* + *b* + *c* + *B*
Area: A = ½ *h* (*B* + *b)*

Module 7A: Post-Lecture

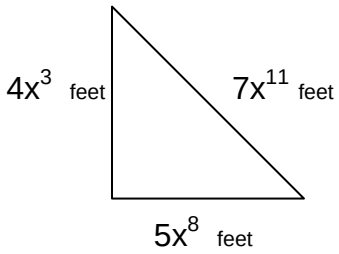
Use the geometric formulas to calculate each exercise.

1. If the length and width of a rectangle is (4x –2y) yards and (6x + y) yards respectively, find the area and perimeter.

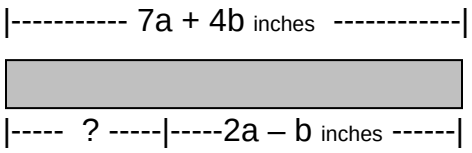
2. If the side of a square is (7a + b) centimeters, find the area and perimeter.

3. If the sides of a triangle is (x+1) inches, (x+2) inches and (x+3) inches, find the perimeter of the triangle.

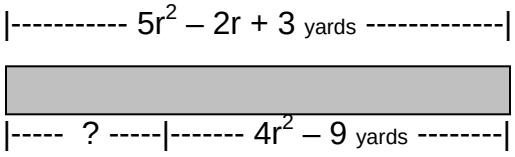
4. Find the area.



5. If the total length of the board is (7a + 4b) inches and a portion of the board is (2a – b) inches, find the length of the missing piece.



6. If the total length of the board is ($5r^2$ – 2r + 3) yards and a portion of the board is ($4r^2$ – 9) yards, find the length of the missing piece.



7. The area of a parallelogram is $(36\ x^4\ y^2)$ square meters. If the base of the parallelogram is 9xy meters, find the height.

8. The sides of a trapezoid are (4p +2q) inches, (3p – q) inches, (9p +3q) inches and
(7p – 5q) inches, respectively. Find the perimeter.

9. If the area of a square is $(16a^3 – 12a^2 + 9a – 4)$ square centimeters, find the length of one side.

10. A board of length $(6x^4 – 12x^3 + 9x^2)$ feet is to be cut into three pieces of the same length. Find the length of each piece.

11. If the area of a parallelogram is $(3p^2 – 13p – 10)$ square meters and its base is (p – 5) meters, find its height.

12. If the area of a rectangle is $(2b^2 – 11b + 12)$ square yards and its length is (2b – 3) yards, find its width.

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David Gosser, Consulting Editor, gosser@sci.ccny.cuny.edu
AE Dreyfuss, Editor, aedreyfuss@ccny.cuny.edu
Janet Liou-Mark, Co-Editor, Algebra Modules,
JLiou-Mark@CityTech.cuny.edu
June Gaston, Co-Editor, Algebra Modules, jlg1196@aol.com

The City College of New York
Marshak Science Building, MR-1024
160 Convent Avenue, New York NY 10031
Phone: 212-650-5704 Fax: 212-650-8339
Email: info@pltl.org Website: www.pltl.org

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